DOCUMENT RESUME

ED 269 341 SO 017 186

AUTHOR	Anisef, Paul; And Others
TITLE	Models and Methodologies Appropriate to the Study of Outcomes of Schooling in Ontario's Multicultural Society.
INSTITUTION	Ontario Dept. of Education, Toronto.
REPORT NO	ISBN-0-7729-1222-X
PUB DATE	86
NOTE	156p.
AVAILABLE FROM	Publications Sales, The Ontario Institute for Studies in Education, 252 Bloor Street, West, Toronto, Ontario M5S 1V6 Canada.
PUB TYPE	Reports - Research/Technical (143)
EDRS PRICE	MF01/PC07 Plus Postage.
DESCRIPTORS	*Educational History; Educational Research; *Education Work Relationship; Followup Studies; Foreign Countries; Models; *Outcomes of Education; *Program Effectiveness; *Role of Education; *Student Educational Objectives
IDENTIFIERS	*Canada (Maritime Provinces)

ABSTRACT

This report explicates conceptual models of schools outcomes and related research methodologies in order to increase an understanding of the diversity and structure of desired outcomes. The complex interrelationship among models of education, desired outcomes, methods of achieving those outcomes, and methods of studying the results is approached from socio-historical, theoretical and empirical viewpoints. An historical overview of education in Ontario documents the interrelationship between societal change and educational reform as well as the cyclic nature of educational philosophies. Student outcomes are defined through a typology and a discussion of current educational policy goals in light of that typology. Three major sociological models of education--structural functionalism, conflict theory, and the interpretive paradigm--are reviewed with respect to the kinds of outcomes and determinants stressed and characteristic research methodologies. The substantive areas of transition to work, academic achievement, and multiculturalism are examined to further the investigation of the utility of larger models for studying specific outcomes. The definition and measurement of models and outcomes by Canadian researchers in the past is examined through an inventory of Canadian data sets identified in the literature, through the Ontario Educational Research Information System (ONTERIS), through all major Canadian data archives, and through Ontario school boards. The results of a survey of education practitioners include perceptions of desirable outcomes and speak to the needs of future research. Two major conclusions and six specific recommendations are posited. The inventory of data sets and the interview schedule for the study are appended. A reference list is provided. (Author/BZ)

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MODELS AND METHODOLOGIES APPROPRIATE TO THE STUDY OF OUTCOMES OF SCHOOLING IN ONTARIO'S MULTICULTURAL SOCIETY

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This research project was funded under contract by the Ministry of Education, Ontario.

This study reflects the views of the authors and not necessarily those of the Ministry of Education.

The Honourable Sean Conway, Minister

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ONO 3731

Canadian Cataloguing in Publication Data

Anisef, Paul, 1942-
Models and methodologies appropriate to the study of outcomes of schooling in Ontario's multicultural society

Bibliography: p.
ISBN 0-7729-1222-X

1. Education--Ontario. 2. Education--Research--Ontario. I. Baichman, Etta, 1945- . II. Ontario. Ministry of Education. III. Title.

LA418.O56M62 1986   370'.7'809713   C86-099636-0

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ABSTRACT

The report explicates conceptual models of school outcomes and related research methodologies in order to increase an understanding of the diversity and structure of desired outcomes, to provide a context for existing findings on effective schools, and to provide materials useful for long-term research and evaluation strategies. The complex interrelationship among models of education, desired outcomes, methods of achieving those outcomes, and methods of studying the results is approached from socio-historical, theoretical, and empirical viewpoints. An historical overview of education in Ontario documents the interrelationship between societal change and educational reform as well as the cyclic nature of educational philosophies. Student outcomes are defined through a typology and a discussion of current educational policy goals in light of that typology. Three major sociological models of education -- structural functionalism, conflict theory, and the interpretive paradigm -- are reviewed with respect to the kinds of outcomes and determinants stressed and characteristic research methodologies. The substantive areas of transition to work, academic achievement, and multiculturalism are examined to further the investigation of the utility of larger models for studying specific outcomes. The definition and measurement of models and outcomes by Canadian researchers and education professionals in the past is examined through an inventory of Canadian data sets identified in the literature, through ONTERIS, all major Canadian data archives, and Ontario school boards. Current definitions and measures of school outcomes are provided in the results of a survey of education practitioners. These data include perceptions of desirable outcomes and the OSIS goals of education and speak to the needs of future research.

Two major conclusions form the basis for a series of recommendations. Although sociological models of education cannot be usefully synthesized, they strongly suggest the utility of complementary research methodologies. There are many outcomes of education possible in today's society and the present trend appears to focus on non-cognitive aspects (such as self-esteem) where research is generally lacking. Provision for systematic prioritization of what outcomes to study and standardized collection of data on selected outcomes into a central repository, accessible to both researchers and policy makers, is central for successful long-term research strategies.

Specific recommendations include: 1) eclectic use of major sociological models to develop an inventory of factors that should be evaluated for future study; 2) complementary use of both qualitative and survey research methodologies in the same study; 3) promotion of longitudinal studies of educational outcomes; 4) development of a Ministry of Education steering committee consisting of representatives from government, education, and the private sector; 5) that the steering committee sponsor research on educational outcomes and ensure the effective dissemination of findings; and 6) expanded effort into four already existing Ministry of Education services: (a) more even and complete coverage of materials of the ONTERIS data base; (b) inclusion of non-cognitive outcome measures in the Ontario Assessment Instrument Pool; (c) ongoing funding of educational research archiving begun by the Ontario Institute for Studies in Education and the Institute for Social Research; and (d) development of an electronic networking system, already largely in place.

Acknowledgments

The "Models and Methodologies Appropriate to the Study of Outcomes of Schooling in Ontario's Multicultural Society" project was completed at the Institute for Social Research (ISR) at York University. The overall organization of the project was undertaken by Dr. Paul Anisef, the principal investigator, and John Tibert. Although each author was responsible for specific parts of the report, there was considerable collaboration and exchange of ideas among members of the research team. The literature review (chapters 3, 4, and 5) was written by Dr. Anisef and Dr. Darla Rhyne. In addition, Dr. Anisef was responsible for chapter 8, "Conclusions and Recommendations" and the overall unity of the written report, while Dr. Rhyne handled the materials for the Executive Summary and the Introduction. Etta Baichman was responsible for chapter 2 on the history of education in Ontario. The inventory of data sets and the discussion of these empirical studies in chapter 6 were prepared by John Tibert. David Northrup was responsible for the survey of education officers and wrote chapter 7, which analyses the interview data.

Many other people have made contributions to the project. In particular, the authors wish to acknowledge the fine work of Sherri Patrick-Perry and Maria Maciag, Institute for Social Research, and Evelyn Greenberg, Bethune College, in entering and editing the many draft versions of the report. The preparation of the final document was undertaken by Freda Marsden. We also appreciate the helpful comments made by Dr. Jos Lennards, project consultant, the assistance of Anne Oram on the data set inventory, and the technical expertise provided by Bill Bruce and Pierre Angers. The excellent interviewing done by Fern Irwin, Harry Van Bommel, and Paul Williams must be acknowledged. Our final thanks are to the directors and superintendents from the Ontario school boards who generously gave more than half an hour of their time to be interviewed.

CHAPTER ONE

INTRODUCTION

This report explicates conceptual models of school outcomes including both immediate outcomes (such as achievement) and longer term outcomes, particularly the transition to work. The aim of the report is threefold:

1) to enhance an understanding of the diversity and structure of desired educational outcomes;

2) to give a context in which to place the findings of studies on effective and successful schools;

3) to provide materials that can be useful in developing a long-term strategy for research and evaluation.

The complexity of the topic has meant that a number of specific questions are addressed and at times these seem quite disparate, even unconnected. Particular models of education come to the fore, hold sway, and are eclipsed by other models. Education goals or desirable outcomes also change in response to changing societal conditions, needs, and pressures. Educational reform, as an attempt to achieve current goals, is influenced both by the theoretical paradigm then in vogue and societal demands. Results of reform in turn generate new goals and the cycle begins again. This means that models of education, desired outcomes, methods of achieving those outcomes, and methods of studying the results are all intertwined. This complexity of schooling outcomes is approached from three viewpoints in the report to follow: first, the socio-historical; second, the theoretical; and third, the empirical.

Chapter 2 is a socio-historical description of education in Ontario from the 1800s to the 1980s. It documents the interrelationship between societal change and educational reform as well as the cyclic nature of prevailing philosophies of education. This historical overview provides an important general context for the question of the outcomes of schooling. As priorities in the mandate of schools change, so too do definitions of desirable outcomes and strategies for achieving those goals.

The current concern with the outcomes of schooling and their several conceptualizations must also be approached within the narrower historical context of the last twenty years. In the 1960s, there was no controversy about educational outcomes. Schools were seen as "great equalizers" where all students should be given an opportunity to achieve, be promoted, and get ahead in later life. In the years to follow, there was a large and rapid expansion of the entire educational system. Among other things, this expansion was aimed at providing educational opportunity for all individuals or groups previously disadvantaged. It was assumed that investments in schooling would automatically be repaid in individual earnings and national productivity. A nunber of studies challenged the efficacy of schools to attain equality of opportunity. Such findings, coupled with the enormous cost of school expansion, led to a concern with the outputs of schooling. Equality of result was seen to be more practically relevant than equal opportunity and, more importantly, equality of result was seen as attainable through school reform. The impact of schooling debates and the complexities of educational outcomes are addressed in detail in chapter 5.

Together, chapters 4, 5 and 6 constitute a theoretical approach to the issues of interest covering both large-scale models and their more limited application in three substantive areas.

Chapter 3 defines what is meant by student outcomes. It presents a typology of outcomes and relates current educational goals to that typology.

Chapter 4 reviews three major sociological models of education with particular reference to their utility for the study of student outcomes. Beginning with a discussion of the sociological perspective, the analysis then considers structural-functional, conflict, and interpretative paradigms in the sociology of education. Each model is addressed with respect to the societal conditions in which it became prevalent, characteristic research methodologies, and the kinds of outcomes stressed.

Reaction to real and/or perceived crises in education generally takes the form of a series of debates about causes and solutions. The substance of such debate is thus useful for understanding the relationship between models of education and educational outcomes. Chapter 5 examines three major student outcomes from this point of view. The discussion covers academic achievement, transition to work, and multiculturalism in education.

A third approach to models and methodologies for the study of outcomes is empirical. Chapter 6 presents insights provided from an inventory of Canadian data sets relating directly to models and outcomes. Based on data sets identified in the literature, through ONTERIS, all major Canadian data archives, and Ontario school boards, this discussion highlights how outcomes have been defined and measured by Canadian researchers and education professionals in the past.

Chapter 7 deals with the results of a survey of education practitioners designed for this particular project. It thus documents current definitions and measures of school outcomes. These interview data also cover perceptions of models of education and desirable outcomes stemming from those models, perceptions and opinions of the OSIS goals of education, changes in educational policy, and practical aspects of implementing the OSIS goals. Finally, these data speak to the needs of future research in the area of educational outcomes.

The final chapter of the report goes far beyond a restatement of major conclusions and draws together the often quite separate strands of the earlier sections. First, it examines the feasibility of producing a synthesis from the three sociological models of education. It then presents, based on the conclusions of the report, a set of recommendations for long-term research strategies. To summarize in advance, while sociological models of education cannot be usefully synthesized, they provide a list of important causal factors and strongly suggest the utility of complementary research methodologies in future studies of educational outcomes. There are many goals and outcomes of education possible in today's society and the present trend seems to be towards an emphasis on non-cognitive aspects (such as development of self-esteem) where research is unfortunately lacking. Provision for prioritization of what outcomes to study, standardized collection of selected outcomes into a central repository accessible to researchers and policy makers alike, must be central in the development of long-term research strategies.

CHAPTER TWO

SOCIO-HISTORICAL OVERVIEW OF EDUCATION IN ONTARIO

A. EARLY COLONIAL SCHOOLING

Early education in Upper Canada was characterized by a lack of uniformity with respect to methods of learning or financing. Education, which was voluntary, was taken wherever it was made available -- in the home, the workplace, grammar school, Sunday school, or the local community school. Little provision was made by the government to educate the masses. It was left to the family to determine the amount and type of schooling a child would receive. Consequently, education was closely related to social class -- wealthy families who could afford the tuition fees were able to provide their children with advanced education; the majority, if they received any formal education, rarely passed beyond the 3 Rs (Lawr and Gidney 1973, 16).

Locally operated "common" schools provided a few years of basic skills training in a narrow range of subjects, such as spelling, reading, writing, arithmetic, grammar, and geography, while district or "grammar" schools, with emphasis on the classics, trained students for careers in the professions or government or prepared them for further studies in the few universities then in existence (Cameron 1972, 11). Advanced education was seen as essential to producing a civilized and competent elite who would extend Christian thought throughout the New World.

Education was also closely linked to the church, which viewed schooling as a means of promoting piety and winning converts. The church took an active role in training its members for both clerical and lay leadership. Government played a relatively minor role in administering and regulating education. Its role was generally limited to providing land or financial assistance for building and maintaining schools.

By the mid 1800s, the method of providing education had changed dramatically. The main responsibility for the provision of elementary education passed from the family and church to the state. Widespread literacy was advocated as the solution to many of the problems afflicting society and the government responded to this by assuming greater responsibility for the control and administration of education. As the role of government expanded, new acts made schooling more available to the masses and at the same time increased the degree of uniformity among schools.

B. INFLUENCES OF EGERTON RYERSON

Three developments particularly contributed to the efficient reorganization of the school system and demonstrated the typically traditional views of the time: the introduction of a grade system into the common schools, the standardization of textbooks, and the emphasis on examinations. The formation of graded schools depended on having sufficient students to form a class of acceptable size for each grade and on a supply of uniform textbooks. Since rural areas were sparsely populated, graded schools were mainly set up in urban centres. While rural children in one-room schools progressed through a system of forms, there remained an element of flexibility that was lost in the so-called "graded" schools. It could be argued that the graded system with its uniform textbooks and class instruction offered a superior education. However, it contributed to the creation of a mechanical process of schooling, rather than one of uninterrupted growth, which to some degree continued to impede the advancement of progressive education in the twentieth century (Fleming 1972, 180).

During his appointment as provincial superintendent of education, Egerton Ryerson set up a strong central authority to maintain control over curricula, textbooks, and the certification of teachers. He also persuaded the Ontario government to increase education grants and the school boards to finance education entirely from local taxes. The creation of free schools cleared the way for universal attendance. In 1871 the common schools were designated "public schools" and were made free and available to all and the grammar schools were renamed high schools. The increase in public school enrolments far outstripped the increase in the general population at this time (Review of Educational Policies in Canada 1975, 6).

Examinations were formally introduced into the school system as a means of upholding standards of achievement. The external high school entrance examination was instituted as a reaction against the grammar schools' tendency to inflate their enrolment with pupils still working at the elementary level in order to obtain higher government grants. Examinations were also introduced at different levels of the secondary school to determine students' eligibility for promotion and for admission to universities or normal schools (Fleming 1972, 181).

School matriculation examinations, introduced in the 1870s, served the dual function of school leaving and university entrance. They were effectively under the control of the universities, which played a major role in shaping the high school curriculum. Despite the strong university influence, only a small percentage of high school leavers in 1876 entered university. Many only stayed in high school for a couple of years before leaving for jobs in agriculture or industry.

C. MENTAL DISCIPLINE THEORY

In the last quarter of the nineteenth century, the social, academic, and practical values of curriculum selection were bound up in the theory of mental discipline (Stamp 1982, 9-10). The theory provided a justification for both the "general education" of students in the elementary grades and the dominance of a small group of academic subjects, especially the classics, in the high schools. The first priority of an educator was to inculcate appropriate Christian moral values in the student through the introduction of specific subjects in the curriculum, the use of authorized textbooks, and the discipline imposed within the classroom.

The kind of schooling a child received in Victorian Canada was strongly influenced by social class. While Victorian Canadians believed that there was a "natural aristocracy" of talent to be found among all classes, only a fraction of the total number who enrolled in elementary school ever entered high school. The majority dropped out to assist in the financial support of the family. Fewer still completed secondary school.

The difference in urban and rural schools also determined the kind of schooling a child received. While urban schools were highly structured institutions that offered a variety of resources and were staffed by qualified teachers, rural schools were usually ill-equipped, one-room school houses, often staffed by poorly qualified teachers. Moreover, urban students who completed elementary school had access to a near-by high school, while in the pre-school-bus era, rural children could only attend high school if their parents could afford to send them to board in a nearby town (Lawr and Gidney 1973, 103-107).

D. THE NEW EDUCATION MOVEMENT

As Ontario shifted from an overwhelmingly agricultural and rural economy to an emerging industrial and urban society, the traditional academic curriculum came under greater scrutiny and criticism. While traditionalists clung to the mental discipline arguments to support a limited, academic curriculum, others, particularly employers, argued that a more practical, vocationally oriented education would prepare students for occupations more appropriate to the new economy. Educators became increasingly impatient with the rigid, academic mould that had formed around much of Victorian education. Influenced by liberal educational theorists, such as Pestalozzi, Herbart, and Froebel, who emphasized the importance of the individual child's experience and growth, they called upon the schools to abandon anachronistic methods and curricula and to adopt new practical subjects that were more suitable to the students' interests, abilities, and future vocational plans.

This set the stage for "The New Education" movement. It was formally introduced to Ontario teachers in 1886 when J.E. Wetherell, principal of Strathroy Collegiate, addressed the Ontario Teachers' Association on "Conservatism and Reform in Educational Methods". In his address he distinguished between the "Old Education" and the "New Education":

> The former "stored the mind with knowledge, useful and useless, and only incidentally trained the mind", while the latter "puts training in the first place and makes the acquisition of knowledge incidental"....While the Old Education was too one-sided, the New Education promised to develop "the whole being, the mental, the moral, the physical" (Stamp 1982, 51).

The New Education was crucial to the wider social reforms that were advocated at the time. Under the leadership of people such as J.J. Kelso and James Hughes, there developed in Ontario at the turn of the century a loosely knit "child-saving" movement that focused its attention on a variety of social issues. The movement fought successfully for the establishment of kindergartens and a generally more pleasant classroom atmosphere.

> The transformation of the school via the New Education movement was central to the child-saving crusade. New methods of instruction stressed learning by activity rather than memorization, correlation of the subject matter around the child's own widening experience, enrichment of classroom study with material drawn from the school's immediate neighbourhood, and the substitution of love for fear, and of interest for authority in classroom discipline. The purpose of these child-centered methods was not to preach permissiveness, but rather to lead the child to his own acceptance of traditional moral values that had been externally imposed by adult society (Stamp 1982, 53-54).

The reformers also sought to improve rural schools, partially to provide rural children with equality of educational opportunity, but mainly to discourage the rising drift of young persons from the country to the city, which many viewed as a serious threat to the traditional foundations of society. To help build an educational environment that would halt the decline in rural population and reaffirm the values in country living, new subjects and experiences, such as nature study, agriculture, and school gardens, were introduced to make schools more relevant to rural life. A more radical plan involved the consolidation of rural school sections into larger units. The agrarian reformers had initially put their hopes into the continuation schools that had sprung up at the turn of the century, as an alternative to erecting costly central county high schools, because they offered advanced classes and were partially staffed with lower salaried elementary teachers. However, while they did not require a large outlay of funds for accommodation and equipment, they offered a limited curriculum and facilities. The amalgamation of several small schools into larger consolidated schools was seen as having many practical advantages -- better buildings and equipment, better qualified staff, a more efficient system of education, and the opportunity of obtaining a high school education close to home.

The first response to the New Education was the opening in 1891 of the Toronto Technical School, which offered courses in technical and laboratory instruction in subjects such as physical science, architecture, mechanical construction, and building. By 1904, the elementary school program had been broadened to include courses in nature study, art, manual training, and household science. Revised regulations recognized no less than seven different high school programs: general, commercial, manual training, household science, agriculture, university matriculation, and normal school entrance (Stamp 1982, 80). The public's demand for a greater emphasis on technical education led to the passing of the Industrial Education Act of 1911, which provided for more generous provincial grants for all forms of vocational education, whether technical, commercial, or agricultural. This resulted in an immediate expansion of vocational education facilities in the large and medium-sized cities of Ontario. By 1919 there were sixteen technical and commercial high schools in the province.

The variations in high school programs required a redefinition of the concept of equality of educational opportunity. In the late 1800s, the school system had functioned as a unifying force providing a similar learning experience for all students, but by 1913 schools were expected to serve the varying needs and abilities of students in school and to prepare them for future vocations.

> Now the school was to function less as the great equalizer and more as the great selector, selecting the most talented for the higher level jobs, and selecting from the rest those destined for office and factory employment. In the past, much of this sorting process had taken place after young people left school; now the school would predetermine

> those choices....The academic high school would provide the captains and generals for twentieth-century society, while the vocational courses would prepare the infantry troops for the industrial army (Stamp 1982, 83-84).

While demands for educational reform came from within the educational profession and from the public at large, so too did the voices of opposition. Those who opposed the service-oriented premises of the New Educators were known as conservatives. They upheld the view that the ultimate purpose of education was not for the acquisition of specific skills to meet the immediate needs of society, but for the gradual attainment of higher intellectual power through the study of traditional academic subjects in arts and sciences. The conservative tradition attracted many followers largely because it advocated the intellectual ideals of an academic education. Many of its advocates were highly articulate, influential individuals whose criticism of the various reform movements influenced educational policy decisions for decades to come (Lawr and Gidney 1973, 193-195).

By the beginning of the First World War, many of the curricular and administrative reforms of the New Education had reached a standstill or were ignored. The movement gradually became the victim of teacher indifference and public criticism. Rather than accept the challenges and demands that the New Education offered, most teachers retreated into the security of traditional methods. Courses in manual training and domestic science were not quickly integrated into the educational curriculum. The movement to consolidate rural schools also faltered with local opposition to the increased costs in transportation, salaries, and maintenance of the system. The majority of country dwellers did not perceive any necessity for rural school reform. They wanted the new schools to closely resemble the traditional urban high schools.

The 1920s saw an unprecedented rise in student population. Much of this was due to the Adolescent School Attendance Act of 1921, which extended (with some exceptions) the age of compulsory school attendance to sixteen years, and to the rapid growth of vocational education. The abolition of fees, reduced employment opportunities for school dropouts, and a strong desire on the part of most parents to have their children attend high school were also cited as reasons for the increase in attendance. Students who entered high schools in the 1920s also came from a wider socio-economic background than ever before.

Stamp notes that "Though egalitarians still complained of the underrepresentation of children from unskilled labouring backgrounds, the character of the student population had shifted from the more elitist orientation of the pre-war years". A national study in 1929 concluded that "Many of the pupils no longer belonged to those social levels in the community for whose children a complete high school education and subsequent entrance into the university is regarded as a social and professional necessity" (Stamp 1982, 111).

The rise in attendance led to a construction boom that was not matched until the 1960s. The high schools of the 1920s became "institutions of child custodianship" offering "diverse curricula, physical facilities, extra-curricular activities, and opportunities for peer-group contact". They "provided an exacting interlude between the carefree days of childhood and the responsibilities of adulthood" (Stamp 1982, 111).

Expansion of vocational education programs in the trades and business subjects was seen as an important curricular response to the changing economic times. It gave non-university bound students the option of continuing with their education instead of becoming early dropouts, and equipped them with social and vocational skills that could be used in the marketplace. By 1928, more than one-quarter of all Ontario high school students were enrolled in full-time vocational programs.

For the vast majority of Ontario high school students in academic programs, the curriculum offered little change. Students were taught the standards: English and history, ancient and modern languages, mathematics and science. There was little opportunity to study the new social sciences or the contemporary worlds of business or labour.

While the high schools accommodated a wide range of extra-curricular activities, their main objective was to build "scholarship and character" in the student. At the end of the upper school year, students had to endure the formal external examinations, which were touted as the "best test of a student's intellectual mastery and the best predictor of future success at University" (Stamp 1982, 117). Despite alarming drop-out rates, most pupils entered high school with the hope of successfully completing their matriculation. The result was an academic program that catered to the approximately fifteen per cent of the student population that did proceed to university or teachers' college.

E. PROGRESSIVISM

The Great Depression of the 1930s affected the educational scene in Ontario, as elsewhere. There were fewer jobs for school graduates. Classrooms were crowded with former dropouts returning to school to avoid unemployment. There were few positions for newly trained teachers and little money for school improvements and additions. Yet those years were notable for the innovative and progressive educational principles that were implemented at the time.

> Before the end of the decade, Ontario education underwent substantive changes in financing, rural school administration, and curriculum reform. Ironically, seeds sown in the prosperous twenties needed the depressed thirties before bearing fruit (Stamp 1982, 143).

By the 1930s the various parts of the New Education had been refined into a more systematic educational philosophy known as "progressive education". It claimed its greatest advances at the elementary school level. Based on the pedagogical works of John Dewey, its main theme was "the development of the child through purposeful activities". In 1937 a new educational curriculum was introduced that was surprisingly not that much different in content from the old one. The difference lay in the approach to the curriculum: there was to be more careful attention paid to individual differences of the children, reduced emphasis on examinations, and less testing in favour of encouragement to "read, explore, discover, record and create" (Fleming 1973, 186).

The results of the attempted reforms were somewhat disappointing. The guidelines for implementing the curriculum were rather vague for many of the teachers who were poorly educated and too insecure to abandon their highly structured program for the innovative and flexible approach that was required. The new course of studies also required access to libraries and other facilities and materials that were not readily available at the time. Moreover, conservative public and education officials reacted against changes that they perceived as weakening discipline and lessening the emphasis on learning the basics. Thus the subjects of the new curriculum were often taught in the traditional way.

At the secondary level, educators were grappling with ways of dealing with the social problems of the time through the regular academic program. The majority of students continued to choose the academic program in high school and consequently received no exposure to technical or commercial subjects, yet very few graduates proceeded to university. While some educators argued the importance of the matriculation program for all, the progressive educators of the late 1930s pressed for a more general kind of education that would fit the needs of all students. In 1937, a departmental committee proposed a number of changes to the curriculum. Commonly known as the "McArthur Plan", it called for a more flexible common Grade 9 year offering a wide choice of options including social studies, home economics, and shop, thus delaying for one more year the traumatic decision of selecting the matriculation, technical, or commercial program. In addition, a partial core of common subjects would be continued into Grade 10 with all students taking English, social studies, health, and optional courses from one of four programs: general, industrial arts, household arts, or commercial. Successful completion of these two years resulted in an intermediate diploma, thus giving the student who dropped out at this point a sense of accomplishment. At the higher grades more options were made available, fewer departmental examinations were required, and more promotions occurred by recommendation. The old junior and senior matriculation certificates were replaced by secondary school and honours graduation diplomas to emphasize the fact that the high schools were not primarily there to produce university candidates.

While the reform package did not bring an "instant revolution" to the Ontario high school, it managed to introduce some of the social concerns and realities of the time into the secondary school program.

F. POST WORLD WAR II

The period after the Second World War was one of exceptional expansion. The total number of Ontario high school students more than doubled between 1945 and 1960 as increased birth rates and immigration created a flood of new students. To accommodate the increase in student population, the school boards embarked on an expansion program of school construction and renovation. While the boards demanded the construction of attractive, modern schools with the latest in equipment and facilities, at the same time they increasingly abandoned the progressive principles of the 1930s for more traditional conservative views. The outbreak of World War II had already delivered a severe blow to progressive education in Ontario. A call for greater discipline in the face of the collapse of the European democracies had fueled the demands of the critics of progressive education to abandon the liberal educational policies of the 1937 Programme of Studies. The election of Conservative leader George Drew as Premier and Education Minister of Ontario further impeded the progressive wave of educational reform. Stamp notes that:

> a twofold strategy quickly emerged from the Minister and his senior adviser, J.G. Althouse, appointed Director of Education in 1944. First, there was a stress on those traditional aspects of education that had been de-emphasized with the progressive curriculum of 1937: the 3 Rs, the British Empire, and religion. Second came a deliberate move to wean Ontario teachers away from left-leaning politics and win their votes for conservative candidates (1982, 179).

The period between the end of the Second World War and the early 1960s was largely a dead period in terms of needed educational reforms. Consolidation of school boards and the creation of composite schools (locating different programs or streams within one building) enhanced the abilities of the provincial government to make major changes in the 1960s, but these achievements did not affect curricular or educational outcomes on their own. The Royal Commission on Education in the Province of Ontario (the Hope Commission), which was established in 1945 and finally released its report in December 1950, attempted to take a moderate position between the progressive and conservative views. It argued that the existing secondary school program had made little effort to move away from the university oriented curriculum of the nineteenth-century grammar school and was not meeting the needs of students who were not planning to go to university. It recommended that the school system be restructured along a 6-4-3 plan, corresponding to elementary school and high school, with the final stage being junior college, which would offer the equivalent of Grade 13, first-year university, and some terminal courses. The commission suggested the subjects that might be taught at each level and, at times, the methods to be used in teaching (Fleming 1972, 187-188).

Stamp views the report as reflecting "the social conservatism and political naivety of the commissioners":

> ...the report demonstrated a consistent underlying preference for a conservative philosophy.... Although calling for a smoother transition between elementary and secondary school, they were unwilling to suggest "any radical departure from the established trend" of the subject-centered school. "Mastery of subject-matter is the best present measure of effort and the most promising source of satisfaction in achievement".... "Efforts should be made to impress on pupils that all who work hard and honestly...are partners in the good society and warrant social recognition" (1982, 188).

The tri-level organization of the school system, which would have reopened the politically explosive Catholic school issue, and the curricular changes introduced in 1949 by Education Minister Dana Porter, in effect ensured the shelving of the Hope Commission Report. Impatient with the length of time it was taking to release the report, Porter announced his own plans for reorganizing the structure of the system. The curriculum was organized into four divisions: primary, from Grades 1 to 3; junior, from 4 to 6; intermediate, from 7 to 10; and senior, from 11 to 13. The ambitious Porter Plan suggested even further innovations: multi-age grouping in the primary division, bridging the gap between elementary and secondary school levels by treating the intermediate grades as a single division for curriculum purposes, an increase in the numbers of options in the senior division, and a decentralization of curriculum development throughout the entire system.

The recommendation to "decentralize the process of curriculum building" and place it in the hands of a group of teachers and local supervisory officials was only partially fulfilled (Fleming 1972, 188-189). Once the novelty had worn off, many teachers reverted to departmental curriculum guidelines. The official policy of indifference from the new conservative Minister of Education, William Dunlop, the lack of support from departmental inspectors who jealously guarded their leadership roles, and the haste in which the scheme was presented to unprepared and untrained teachers hastened the collapse of the plan. While it was not completely disowned, there was relatively little activity by the end of the decade.

G. THE RETURN TO CONSERVATISM

The Cold War environment of the 1950s did little to enhance public support for the progressive movement. Influenced by American fear and paranoia around the expansion of international Communism and Soviet superiority in space technology, Canadians looked for a scapegoat and found it in the educational system with its left-wing permissive principles of progressivism. By the early 1950s a back-to-basics movement was in full stride in Ontario education. The movement had the full support of Education Minister William Dunlop. Barely three months after taking office, he told a group of Toronto teachers that:

> "Too many fads are creeping into education these days to the exclusion of down-to-earth fundamentals"....These fads encouraged "self-expression and day-dreaming"....The prime purpose of schooling, he emphasized over and over again, was "to produce loyal, intelligent, right-thinking, religious, and freedom-loving citizens". But this could not be accomplished "until the last shreds of this so-called progressive education are gone" (Stamp 1982, 193).

Dunlop was inspired by the writings of Hilda Neatby, a University of Saskatchewan history professor who in her book, So Little for the Mind, produced a scathing attack on John Dewey, the spiritual father of progressive education, and his disciples in the Canadian schools and teachers' colleges. These people, she claimed, "neglected formal grammar and written composition, de-emphasized history and the great works of literature, put too much faith in guidance and extra-curricular activities, and were far too casual about promotion and graduation" (Stamp 1982, 192).

Dunlop favoured "the eradication of every trace of progressivism from the schools". He reinstated history and geography as separate subjects in the intermediate grades, curtailed many high school options, halted provincial grants for the building of gymnasiums and auditoriums, and discouraged the formation of curriculum committees. There was little progressivism to eradicate in Ontario since few parents and taxpayers approved or supported progressive education policies. As enrolment in the schools increased, large teacher shortages developed. Schools were often staffed by teachers with too little training to understand or implement progressive principles (Fleming 1972, 75). High school students were ruled by conformity. School work was routine involving homework, memorization, and frequent testing. The entire academic program was designed to prepare students to write the Grade 13 departmental examinations.

The 1950s were a grim time for vocational education. The provincial government encouraged the academic focus by paying larger subsidies to secondary schools offering Latin or Greek in their "collegiate" programs. High school core subjects tended to be dictated by the universities through their stipulation of subjects required for admission. Throughout this period, the University of Toronto honours graduate dominated the teaching profession particularly in academic subjects. Students streamed into the technical or commercial programs were required to pass the same exams in core subjects as those taken by students in the academically oriented program. The result was that only twenty-two out of every hundred students who enrolled in the Grade 9 industrial course actually graduated from Grade 12 (Fleming 1971, 91-140).

The retention rate of the general student population was somewhat better. In 1955, fifty per cent of Grade 9 students reached Grade 12 in three years and twenty-five per cent made it to Grade 13 in four years. The Grade 13 figures showed an overrepresentation of students from professional and managerial backgrounds, while the student population of the first four years more closely reflected the general population mix (Stamp 1982, 195).

District high schools continued to replace continuation schools in the rural areas. Designed to bring equality of educational opportunity to the country, the district high schools were modern structures, offering a fairly wide range of subjects and providing up-to-date facilities to between 300 to 400 pupils. As the rate of attendance in rural high schools increased, the construction of the district high schools offered rural students the opportunity to share the high school experiences of their urban counterparts.

> Rural students took for granted their daily bus rides, larger schools, wider choice of optional subjects, and the organized athletic and social activities provided by the district high schools. But they showed less enthusiasm for the one subject these schools were expected to emphasize - agriculture (Stamp 1982, 195).

Rural students wanted programs similar to those offered in urban schools. They saw high school as a means of escape from family life and considered agricultural courses to be second best. The 1950s saw the last concerted effort by the school boards to provide agricultural education in rural Ontario. By the next decade all vocational and academic subjects were virtually interchangeable between urban and rural schools.

H. THE TECHNICAL VOCATIONAL TRAINING ASSISTANCE ACT AND THE REORGANIZED PROGRAM

By the early 1960s, Canadians had begun to associate an increase in educational attainment with economic results and were therefore willing to invest heavily in various educational endeavours. Many parents thought of the material rewards and social status that accompanied higher education as a sound investment, if not for themselves, then certainly for their children. While other benefits of education such as the development of moral character and the appreciation of cultural activities were acknowledged, the popular support for the expansion of the educational system rested on uncritical confidence in the efficacy of education to improve the economy, solve social problems, and ensure the economic and social improvement of the individual through better employment.

The pervasive acceptance of these premises by elected politicians and the public led to the passing of the Technical and Vocational Training Assistance Act of 1960. It was a boldly ambitious attempt by the federal government to stimulate economic activity by dispensing millions of dollars to the provinces so that they might provide facilities for the training of Canadian youth through shared vocational education programs. At a time of high unemployment among the unskilled, it was embarrassing to discover that technically educated immigrants from Western Europe had little difficulty finding jobs while Canadian youth stood in the unemployment lines. It was obvious that the Canadian educational system was not meeting the needs of Canadian youth and society in general. The federal government had little difficulty convincing Queen's Park to commit itself to long-term expenditure programs that depended in part on the continuation of federal financial support. The Ontario government recognized the perceived need for trained people in an industrial and technical society and saw the expansion in vocational training programs as providing educational choices to a wide spectrum of young people who otherwise would not have found the traditional academically-oriented high school curriculum suitable. Vocational education became a good economic and social investment and in the process produced an explosion in the construction of vocational schools and additions to academic institutions (Pitman 1981, 17).

A closely related outcome of the Technical and Vocational Training Assistance Act was the reorganization of the secondary school system by Education Minister John Robarts. With the prospect of greatly increased geographic accessibility to vocational education, Robarts proceeded to overhaul program organization and curriculum. Central to this effort was the offering of attractive options to students not destined for university, increasing the retention rate among this group, and providing students with better occupational preparation for changes in industry (Fleming 1971, 94).

The Reorganized Program or Robarts Plan, introduced in the fall of 1962, called for a three-streamed model of secondary education -- Arts and Science, the former general or academic course; Business and Commerce; and Science, Technology, and Trades.

In all three branches, Grade 9 students would choose or be streamed into either a five-year university preparatory program, a four-year program ending at Grade 12 and leading to skilled employment, or a two-year version of the four-year program for those wishing to leave at the minimal school-leaving age of sixteen. Wherever student population was sufficient, high schools would become fully composite by offering the greatest practical range of program streams, thus making more options available to students (Stamp 1982, 204).

The Robarts Plan succeeded in increasing retention rates and providing a varied high school curriculum. However, in practice, certain program streams quickly proved to be unfeasible. The two-year occupational program became increasingly unnecessary as the four-year program proved its ability to retain non-university bound students' interest and attendance beyond the minimum school-leaving age. While enrolment in the four-year Business and Commerce, and Science, Technology, and Trades branches steadily increased, university faculties continued to give absolute preference to graduates from the five-year Arts and Science branch and consequently few students enrolled in the five-year stream of the other two branches. The universities continued to retain control over admission entrance standards including the specification of required high school course prerequisites. Curriculum innovations in the five-year stream were not encouraged.

Conversely, the four-year programs met with little institutional resistance to curriculum changes. Department curriculum innovators, who were later to gain extensive influence over the high school programs through the Hall-Dennis Report and the Davis reforms of the late sixties, saw the four-year Arts and Science program as an ideal opportunity to introduce "progressive" curriculum ideas into the system. Courses were cast along thematic clusters, such as World Politics, Man and Society, and the like, and enjoyed considerable success among the students.

The process of streaming proved to be more rigid than had been promised. Students who were streamed into a branch and program by the end of Grade 9, often found themselves locked in for the remainder of their high school studies. Moreover, the decision to stream into a particular branch was not always based on students' occupational goals. Rather, past academic achievement became the criterion for streaming. Consequently, low achievers, and this often included students from lower socio-economic backgrounds, found themselves in the vocational branches and the four-year programs. As a result, the vocational programs became dumping grounds for the rejects from the academic stream.

While the Robarts Plan heightened the status of and the emphasis on vocational education at the secondary level, it did not necessarily guarantee a change in the way vocational students were perceived. After a short while it became quite evident that four years of secondary education were not sufficient to meet the demands of the increasingly technological society of the mid-sixties and that even more advanced vocational training was required. The next logical step was the expansion of non-university postsecondary educational facilities. The solution was seen in the creation of a new type of postsecondary institution and in 1966 the Colleges of Applied Arts and Technology (CAATs) were launched (Fleming 1972, 22-23).

I. THE DAVIS YEARS

Grade 13 and particularly the final "departmental" or external examinations attracted increasing criticism from parents, teachers, students, and universities. They complained that the departmentals were "neither pedagogically sound nor condusive to good mental health" (Stamp 1982, 206), and should not be used as the sole criterion for determining a student's academic future. It was also becoming increasingly difficult to administer and mark the examinations as the number of students writing the departmentals continued to grow. In January 1964, William Davis, who had succeeded Robarts as Education Minister, appointed a Grade 13 Study Committee to examine these issues. The committee recommended the abolition of external exams, more emphasis on team work, the teaching of most subjects at both the "general" and "advanced" levels, and, ultimately, the reduction of thirteen years of Ontario schooling to twelve (Stevenson 1970, 482). External examinations were completely phased out by 1969, but none of the other recommendations was implemented.

Human Capital Theory and the Democratization of Education

It was during this time that the expansion of higher education, because it constituted an investment in "human capital", gained wide acceptance. In essence, human capital theory was based on the belief that an increase in the educational attainment of the work force would lead to significant gains in the economic well-being of the individual as well as increasing the Gross National Product (GNP). High pressure advertising campaigns urging students "to learn more to earn more" paid off with increased retention rates for the normal postsecondary age group. The estimated retention rates from Grades 9 to 11 jumped from 53 per cent in 1956-58 to 84 per cent in 1969-71 (Wilson 1977, 22-23).

While the human capital theory played a significant role in fostering the educational expansion of the sixties, its impact would not have been nearly as great had society not been so receptive to the democratization of education. In his book, The Vertical Mosaic, John Porter attacked the inequalities of the educational system, the odds against working-class children remaining in high school, the monopolization of the universities by the middle class, and the gap between rural and urban education. Porter and others argued that all young people should be given the opportunity to continue their schooling, commensurate with their abilities and interests, irrespective of their origins, race, or sex (Lawr and Gidney 1973, 235). The acceptance of the arguments for democratization and for economic development led to a wide range of educational measures, some of which included the consolidation of small school districts, the busing of rural children to larger central schools, and the establishment of large-scale public financial aid programs for postsecondary students.

The decision on the part of the Robarts government early in the 1960s to make university education accessible to all who met the minimum requirements, resulted in an explosive growth in the student population. Enrolment in provincially assisted universities in Ontario increased by 167.2 per cent between 1955-56 and 1964-65 (Fleming 1972, 50). This, coupled with the abolition of the Grade 13 external examinations and the introduction of the Reorganized Program of Studies, weakened the role of the high school as a training ground for university. Wilson notes (1982, 195) that the high school was transformed from "a screening institution to a holding basin" as the academic and vocational "sorting-out" of late adolescents was transferred to postsecondary institutions. As a consequence of these two major events high schools entered a state of flux with respect to their goals and objectives.

The creation of the CAAT system, with its liberal admission policies and its emphasis on occupationally oriented courses, also shifted the direction of the secondary schools. Whereas the expansion of vocational training had been strongly promoted in the first part of the twentieth century, and particularly in the early sixties (the Robarts Plan), the creation of the community colleges and the tendency for students to delay direct entry into the job market turned the focus away from the teaching of vocational subjects in the high schools. Pressure also began to build against the somewhat rigid streaming of the Robarts Plan and educators started to question the validity of some of the programs. Several schools began to experiment with individualized timetabling that crossed both grades and streams. New subjects such as theatre arts, sociology, economics, family studies, and computer science were introduced into the secondary schools. Schools were encouraged to make radical changes in school design, replacing the traditional classroom with open areas, creating better libraries and general classroom facilities.

Education in the 1960s became, as Fleming so aptly titled the summary volume of his extensive history of Ontario education, Ontario's Preoccupation. Newspapers and magazines expended considerable effort in editoralizing and reporting on the criticisms of existing educational practices and proposed reforms. Many parents who had suddenly acquired first-time affluence in the economically stable sixties, actively supported the education mania as they encouraged their children to indulge in educational pursuits (e.g., university). Curriculum brainstorming efforts were attempted by the Ontario Curriculum Institute and its successor, the Ontario Institute for Studies in Education (OISE). By 1969, Canada's share of the GNP devoted to public expenditure on education (7.9 per cent) was higher than any other industrialized nation.

The Hall-Dennis Report

The education mania also rekindled interest in pedagogical reform (Lawr and Gidney 1973, 252). There was considerable talk of educational innovation as many of the "child-centered" ideals of progressivism were reaffirmed. The reform movement gathered added momentum with the publication in June 1968 of Living and Learning, the report of the Provincial Committee on Aims and Objectives of Education. Co-chaired by Mr. Justice Emmett Hall and Lloyd Dennis, the twenty-two member committee made 258 recommendations, proposing radical changes in teaching methods and curriculum content. Borrowing heavily from the philosophical ideologies of John Dewey and the progressive education movement, the Hall-Dennis report focused on the individual needs of the child in relation to learning and stressed that the prime purpose of the school was to meet those needs. The report proposed changes in curriculum that were to be organized around three broad themes - communications, humanities, and environmental studies. The student was no longer expected to "memorize, mimic, regurgitate and duplicate the pearls of wisdom to which he is exposed" (Stamp 1982, 218), but would participate and benefit from the creative aspects of the learning process by selecting and planning her or his own studies. To create a positive, supportive classroom environment, corporal punishment and after school detentions would be abolished; student-parent conferences would replace class standing and grading as a form of reporting individual progress; and rigid systems of streaming and grade promotion would be eliminated in favour of individual progression. The report noted that "it is irrational and unfair to require all children to start in school at a common level or to expect them to reach standards of achievement with any degree of uniformity", and suggested that the ideal school system "would include no horizontal or vertical division of pupils into such groupings as elementary, secondary, vocational or academic or above or below average" (Living and Learning 1968, 75-77).

Fleming (1972, 220) describes the report as:

> an adoring tribute to the nature of the child; a statement of limitless faith in his potentialities if developed in an ideal educational environment under the guidance of inspired teacher; ... a powerful condemnation of rigid, inflexible, outmoded, and unproductive activities and practices in schools and school systems in Ontario.

Some critics labelled the Hall-Dennis report unrealistic and too costly to implement. James Daly, a historian at McMaster University, wrote a highly detrimental criticism of the report in a book entitled Education or Molasses, calling it "at its frequent worst ... a bucket of molasses, sticky sentiment couched in wretched prose" (1969, 1). However, the mood of the late sixties was one of radicalism and change and the report was embraced by the press and public with enthusiastic support.

The Hall-Dennis report virtually nailed the coffin shut on the Robarts Plan. Since the time of his appointment as Deputy Minister of Education in December 1966, Jack McCarthy had encouraged experimental programs, involving non-graded high schools and a "credit system" based on individual timetables, optional courses, and subject promotion. By the spring of 1969, with more and more schools requesting approval to experiment with the credit system, McCarthy decided that the time was ripe to formalize a change from the rigid streaming of the Robarts Plan to an individualized credit system. This led to the redrafting of Circular HSI by a departmental committee and the official announcement by William Davis in March 1969 that the Reorganized Program would be replaced by a new system of education.

The "Davis System" (Stamp 1982, 222), strongly influenced by the Hall-Dennis Report, was based on an extremely flexible credit system. Curricular choices were selected from four broad areas of study. Communications, social sciences, pure and applied sciences, and arts courses were offered in up to five levels of difficulty (remedial to advanced) and students were permitted free choice of subjects provided they selected at least three from each curriculum area. The Grade 12 diploma required twenty-seven credits while six additional credits earned the student a Grade 13 diploma. Course outlines supplied by the department were employed by the teachers merely as guidelines from which to build individualized programs.

Ontario high schools were initially given the option of offering either the Robarts or Davis model, but by September 1972 every school in the province had switched to the new system.

Stamp (1982, 222) describes the outcomes of the new system to students, teachers, and universities:

> For students, the credit system brought greater freedom and increased self-responsibility. Course choices tended to be influenced by a mixture of postsecondary requirements, parental wishes, advice from guidance counsellors and teachers, and individual whim. Enrolments decreased in history and foreign languages, remained steady in English and mathematics, and increased in the sciences, creative arts, social sciences, and vocational subjects. For teachers, the new approach brought more flexibility in curriculum design and teaching style, together with the feeling that courses had to be "sold" to students in a competitive market-place. The credit system also doomed the century-old pattern of universities prescribing rigid admission criteria. By the early 1970s, Ontario universities were obliged to rely more than ever before on individual high schools to define readiness for postsecondary study.

The consolidation of schools and the expansion of the educational system presented teachers with excellent prospects for promotion and advancement. As the need for teachers increased, their salaries and status rose dramatically and for the first time in several decades surpassed the average of the labour force (Channon and Brown 1978, 33). Buoyed by their success in achieving higher status, teachers became more militant in demanding greater input in policy decisions and particularly in negotiating higher salaries.

Student activist and parent power movements arose, demanding greater responsibility and involvement in formulating educational policies and in making educational decisions. The "free school" movement was given a great deal of attention in the late sixties. Based on the model of A.S. Neill's Summerhill, the free school had a distinct impact on public education in Ontario and prompted the opening of several "alternative" schools within the public school system.

In March 1969 the provincial committee on religious education dealt another blow to traditional education (Stevenson 1970, 1982). Chaired by former Lieutenant Governor Keiller Mackay, the committee recommended the elimination of the formal system of religious instruction established in public schools since 1944 and the establishment of a more "informal moral or ethical education, which would permeate the entire curriculum and encourage pupils to make their own value judgements and moral decisions" (Stamp 1982, 223). While the report attracted both outrage and enthusiasm, it tended to reflect the general mood of the times.

J. THE PENDULUM SWINGS

The optimistic and expansionist mood of the sixties gave way to policies of restraint and retrenchment in the 1970s as the harsh realities of recession, unemployment, and inflation set in. The new style of education was becoming exceedingly expensive to maintain and drew increased criticism from politicians and officials. Enrolment levelled off and then decreased, leaving numerous schools with a surplus of supplies and facilities.

The "human capital" theory of the sixties could no longer be perceived as the solution to the economic problems of the seventies. As the baby boom children moved into the labour market, they quickly discovered that many of the jobs for which they had prepared themselves by remaining in university, had begun to disappear. Moreover, as more and more educated people flooded the job market, the value of education dropped. A disillusioned and discouraged group of graduates blamed the schools for leading them to believe that "the world belonged to the educated" (Channon and Brown 1978, 41).

Public education began to compete with social services for funding. Government officials, alarmed by the high percentage of government expenditure (20 per cent) devoted to education in the 1960s, cut costs, reduced programs, and instituted budget ceilings. Teachers threatened by declining student enrolment and the possibility of unemployment, and at the same time dissatisfied with cutbacks and increased class sizes, became even more militant. A series of confrontations developed when the provincial government and school boards attempted to hold the line on salary increases. This culminated in the Metro Toronto secondary school teachers' strike on 12 November 1975.

Public attitudes toward education became increasingly conservative and critical as education costs continued to escalate. But what created even further dissatisfaction was a growing sense of disillusionment with an educational system that had not lived up to the extravagant promises of the previous decade. Society demanded its money's worth from education and "accountability" became the new buzz-word. Schools and especially teachers were expected to be accountable for students' academic performance.

The number of education critics grew considerably as enrolment declined in publicly supported schools and increased by 32 per cent in Ontario's private schools. Grade 13 examination results came under particular scrutiny. Under the old system of departmentals the success rate of students writing exams had been approximately 80 per cent each year for the previous two decades. But in 1968, the first year the departmentals were abolished, the figures jumped to 92 per cent. The number of Ontario scholars (those graduates with a Grade 13 average of 80 per cent or more) also increased considerably from 5 per cent in 1965 to 17 per cent in 1973 (Stamp 1982, 246).

The universities also came under attack as academics accused students of being functionally illiterate and the schools of "pandering to mass tastes and of ignoring their central intellectual purpose" (Tompkins 1977, 15). Many university professors refused to accept the fact that the mass enrolment of students had in fact transformed the universities from elitist institutions to part of "a tertiary level of public education" (Wilson 1982, 199).

The debate raged on between traditionalists who argued that schools should continue to focus on the development of intellectual competence through the teaching of basic language and cognitive skills, and progressives who accused the traditionalists of failing to take into account the implications of the vast increases in the holding power of the schools and of ignoring the drastically changed social, economic, and political environment from which students now came.

A "back-to-basics" movement calling for a return to a more traditional form of education gathered momentum as the Ontario Economic Council, the Canadian Chamber of Commerce, and numerous trustees and parent groups joined the demand for a compulsory core curriculum. In February 1973, the Ontario Teachers' Federation presented a brief calling for a return to compulsory subjects. Faced with mounting criticism, Education Minister Thomas Wells announced in November 1973 that the following year high school students would have to take six compulsory subjects: four in English and two in Canadian studies. He hoped that this would placate the critics of the credit system, but the problems and criticisms continued.

In a 1976 published survey of 19,000 high school teachers entitled At What Cost, the Ontario Secondary School Teachers' Federation (OSSTF) reported that teacher morale was at an all time low. The survey placed the blame on the "Hall-Dennis theories", claiming they were largely unsuited to secondary schools. "The discrepancy between Hall-Dennis theory and classroom experience has meant daily frustration for secondary teachers, frustration which has contributed to the decline in teacher morale.... The strong emphasis in individualization and the happy school has overshadowed the development of basic skills and knowledge and vocational training" OSSTF stated (1976, 34), and called for a return to a core curriculum.

Wells responded by announcing in October 1976 that all Grade 9 and 10 students would be required to study English, mathematics, science, and Canadian history or geography. The ministry would produce new guidelines dictating core content in all subjects with the exception of some optional high school courses. Wells also recommended a plan for uniformity in marking and urged the universities to introduce entrance exams. In describing his new curriculum, Wells conceded that:

> We are now convinced that, in our enthusiasm for curriculum flexibility, we may have gone too far in decentralizing the responsibility for the preparation of courses of study at the elementary and secondary levels. In championing the concept of local autonomy in curriculum development, I believe that we have relinquished to too great a degree the element of central direction and central expectations and standards of student achievement (Wilson 1977, 31).

In early 1975 Wells had commissioned a series of research studies to review the policies affecting the interface between secondary and postsecondary education. Responding to concerns expressed over "mark inflation" in the high schools, the deterioration of students' basic language and mathematics skills, and the increasing difficulties postsecondary institutions were experiencing in assessing students for admission because of diversity in courses and marking standards, the three part Secondary/Post-Secondary Interface Study, was released in January 1977. The researchers concluded that, contrary to public opinion, students were not functionally illiterate and were getting adequate training to develop their first language (English/Français) and mathematics skills. Marking standards were not in "a state of chaos"; predictions of student achievements made on the basis of raw marks were just as accurate as those based on the departmental exams of the past.

The majority of students, teachers, and members of the general public surveyed, felt that standards in education had deteriorated and blamed the secondary school system for this. The reasons given included lowering of scholastic standards, lack of uniform standards and uniform curriculum content, and the weakness of the credit system. There was almost universal agreement among teachers and the general public that there should be compulsory core subjects in high school, including first language and mathematics. Many educators also felt that history and science should also be compulsory and that there should be uniformity in course content for compulsory subjects (Secondary/Post-Secondary Interface Study 1976).

Aside from a perceived need to improve academic standards, the schools in Ontario experienced other educational crises in the mid-to-late seventies. The previous two decades had brought a wide range of social changes in Ontario. Increased family breakdown, the changing role of women in society, the emerging drug culture, cultural pluralism in the schools, and confusion in values had created problems with which the schools were often neither prepared nor equipped to cope. The economic recession increased the movement of job seekers from province to province and created difficulties for transferring students. At the same time it focused attention on youth unemployment and the transition from school to work.

Public concern was also growing with respect to discipline in the schools (Livingston and Hart 1980). While the public expected the schools to enforce stronger discipline, the schools in turn were not adequately equipped to do this, citing frequent family breakdown, easier availability of drugs, the lowering of the legal drinking age, and the frequent exploitation of violence in the mass media as reasons for the increase in vandalism and violence in the schools.

By the late seventies, public education had shifted from "a growing to a static or shrinking system" as declining enrolments hit the public schools. In addition, recessionist government policies of financial restraint placed the school boards under pressure to retain fewer teachers, lay off teachers with low seniority, and close schools. Faced with projections of continued declines in school enrolments until the year 2000, the Ontario government in August 1977 commissioned Dr. Robert W.B. Jackson to look into the effects and implications of declining school enrolments in Ontario. In the Final Report of the Commission on Declining School Enrolments (CODE), Dr. Jackson noted that "the main challenge facing the people who make decisions for our education system does not come from declining enrolments but from the economic and public-finance conditions that characterize the late 1970s and promise to be facts of life for some years to come" (1978, 1). He saw these conditions as in turn having a significant effect on the administration, financing, and organization of public education.

The report outlined future demographic conditions and changes in Ontario and made 107 recommendations on policies and financial measures to be implemented in dealing with declining enrolments in the schools. In its final recommendation the report reminded us to "never lose sight of the fact that the child as the learner is not only the centre of the school system but the only reason for its existence" (1978, 315).

In Issues and Directions (1980), the Ministry of Education not only responded to the recommendations detailed in the final report of the Commission on Declining School Enrolments but used the occasion to outline the actions it intended to take or had already taken in dealing with a shrinking public education system. Faced with mounting criticism of the school's effectiveness in teaching basic literacy and mathematic skills, its handling of discipline, and the apparent gap between school and the work world (in 1980 the average unemployment rate among fifteen to nineteen year olds in Ontario was 15.9 per cent), Dr. Bette Stephenson, who had replaced Thomas Wells as Education Minister, initiated a thorough study of Ontario's secondary school system. The Secondary Education Review Project's (SERP) mandate was to create a blueprint for the renewal of high school education by reviewing almost every aspect of the secondary school system, focusing in particular on the credit system, content and organization of the curriculum, standards and discipline, and the role of the school in preparing students for employment (SERP Report 1981). Headed by Duncan Green, former Director of Education for the Toronto Board of Education, who worked with four committees composed of representatives from education, business, labour, and government, the project published a

Discussion Paper containing 101 recommendations. Individuals and organizations were invited to submit written responses outlining their comments and suggestions. The committee was deluged with about 3000 written submissions and more than 2000 signed form letters or petitions. These were systematically analysed and taken into account in preparation for the project's final report.

The project's steering committee submitted the final report and its 98 recommendations to the Minister of Education on 31 October 1981. The central recommendations of this report proposed a reorganization of the school program to give it greater coherence, breadth, and stability, and a single diploma to make it clear that students preparing for direct entry into employment were choosing as valuable and important a future as those preparing for postsecondary education (SERP Report 1981, 8). The committee recommended: that five years of study be condensed into four years; a higher proportion of compulsory credits; a more prescriptive curriculum particularly in the earlier years of high school; a higher credit requirement for graduation (thirty credits versus twenty-seven then required); and the establishment of prerequisites for certain subjects. In recognition of the various needs and abilities of students, the committee proposed the offering of courses at three levels of difficulty - basic, general, and advanced. Moreover, it recommended a stronger link in curriculum between Grades 7 and 8 and the secondary schools, and between secondary schools and postsecondary institutions. The report also recommended the monitoring of student achievement by the development and implementation of the Ontario Assessment Instrument Pool (OAIP).

In recognition of students' needs to gain more practical experience in the workplace while still attending school, recommendations were made to establish a closer relationship between schools and the broader community, particularly in the business and industrial sectors. Schools were also advised to increase the number of programs that prepare students for jobs after graduation, and to improve their career counselling and guidance facilities.

A number of recommendations focused on French language education, Catholic separate school funding, and the education, culture, and counselling of Native students. Other recommendations proposed the sharing of resources among schools or dealt with continuing education and evaluation of teachers.

On the issue of school discipline, the report recommended several ways of handling disruptive behaviour and improving school atmosphere. It suggested that all high schools establish clear codes of student behaviour regarding absenteeism, vandalism, drug abuse, and alcoholism.

The SERP Report generated additional responses from a large number of individuals and professional and public groups. Detailed briefs were received from teachers' federations, trustee groups, civic associations, and administrators in the early part of 1982. The Ministry of Education responded to SERP with its own document entitled The Renewal of Secondary Education in Ontario (ROSE), in which it accepted most of the recommendations made in the SERP Report with minor modifications. Released in December 1982, ROSE outlined the ministry's plans for secondary education in Ontario in the 1980s. A clear consensus was reached on overhauling the structures of education, tightening the curriculum, reducing the plethora of curriculum guidelines, and improving Grades 7 and 8, long considered a weak section in education.

Under the ministry's new system, the two diplomas (OSSGD and OSSHGD) were replaced by a single credit diploma called an Ontario Secondary School Diploma (OSSD). Students who entered Grade 9 in September 1984 began studying for the OSSD. (Although the OSSHGD will be retained for some students until 1989, it will be phased out by 1990 and only the OSSD will be issued.) The required number of credits was increased to thirty, and the number of compulsory subjects went up to sixteen, with courses being offered at three levels of difficulty - basic, general, and advanced. Grade 13 courses were converted to prescriptive, provincially designed Ontario Academic Courses (OACs), which could be taken towards an OSSD or taken upon completion of the OSSD. Students who completed fifteen compulsory credits but who did not complete the diploma requirements would be able, upon request, to obtain a provincial certificate.

ROSE also called for the creation of a new circular to replace HSI 1979-81 beginning in September 1984. Published in 1984, Ontario Schools: Intermediate and Senior Divisions (OSIS), outlined the curriculum expectations of the Ontario Ministry of Education for programs from Grades 7 to the end of secondary school including the awarding of the Ontario Secondary School Diploma and the Certificate of Education. The thirteen broad goals of education, which originally appeared in the Ministry of Education's 1980 publication Issues and Directions, were again presented in OSIS. The ministry viewed the achievement of these goals as the shared responsibility of students, teachers, and parents who by working together could help each student achieve his or her potential in "physical, intellectual, emotional, social, cultural and moral development" (OSIS 1984, 3).

Since its release, many groups and individuals have voiced opinions and criticisms on a number of issues related to OSIS. This summary will highlight some of those crucial aspects of OSIS that require further research and evaluation.

The criticisms directed at OSIS include:

a) The new system caters to university-bound advanced level students who come predominately from the middle and upper classes. Working-class students, who traditionally come into the school system with lower expectations and ambitions, tend to congregate in the basic and general levels. Faced with having to take sixteen compulsory subjects and obtaining additional credits for the OSSD, many of these students will drop out of school.

b) Working-class students are underrepresented in university. The new system will increase this disadvantage by diverting more of these students away from the advanced level and into either the general or basic level programs.

c) Streaming students into levels at an earlier age will be detrimental to "late bloomers"; these students will not be able to make the switch from general to advanced level courses.

d) "Fast-track" students (those aspiring to complete the OSSD in four years and go on to university) will not have the time to take elective courses or fully participate in school activities. Their absence may also curtail the offering of extra-curricular activities and programs such as music or drama.

e) The implementation of the OSSD will require the universities and the workforce to accommodate a double cohort of high school graduates at the end of this decade.

f) The virtual elimination of Grade 13 during a period of declining enrolment will lead to increased layoffs of teaching staff.

It is too early to assess the full impact of OSIS insofar as it is relatively new and has not been fully implemented. Does OSIS represent a return to basics or are we in fact moving forward in our educational goals to create an environment where the intellectual, physical, and social needs of the student will be met? Although we may have to wait several years before these questions are fully answered, a partial evaluation of these types of issues can be made by examining the responses of education officials to OSIS in chapter 7.

In chapter 3 the broad goals of OSIS in terms of a typology of educational outcomes are analysed. In addition, the relationship between OSIS goals and the educational goals developed by large school boards in Ontario is examined.

CHAPTER THREE

EDUCATIONAL GOALS AND STUDENT OUTCOMES

As the previous overview of Ontario's educational history makes clear, educational goals, educational policy, and societal conditions are all interrelated. Educational goals reflect societal concerns and tend to change with societal conditions. Educational policy is based on explicit or implicit assumptions about the goals or proferred outcomes of schooling. An ever present need is to identify factors that allow for the realization of such preferred educational outcomes. One important way to examine the causal relationship between determinants and outcomes is to look at models of education; this will be done in the next chapter. Here, the concern is with the definition of school outcomes. First is a presentation of a typology to classify the possible results of schooling; second is an examination of current educational goals laid out by government and boards of education in light of the typology.

The typology is intended primarily as an heuristic device, an exhaustive specification of outcomes that will enhance the analysis of models with respect to their utility for studying student outcomes. However, the typology also calls to mind the great diversity of educational outcomes and serves as a reminder that critical outcomes have not always been carefully studied. Much past research and assessment has dealt only with outcomes that are easily measured; this has resulted in an artificial narrowness in the meaning of the term. The relationship of the outcomes typology to current educational goals also enhances an understanding of this apparent gap between the range of educational goals developed by policy makers and the narrowness of research on outcomes. The relationship between possible and preferred educational outcomes also provides additional context for the research recommendations presented later in this report.

A. DEFINING STUDENT OUTCOMES

Table 3.1 presents a typology (originally developed by Astin 1983) of student outcomes. Outcomes are grouped under affective (e.g., feeling states) and cognitive categories, each divided into psychological and behavioural levels. Traditional educational measurement has concentrated on the psychological/cognitive cell. Both grade scores on standardized tests and class rank are outcome statistics that are frequently employed by most schools. In recent years, the "back-to-basics" movement has led to a particularly strong focus on this cell. While earlier educational philosophies may have emphasized the short-term or intermediate nature of these outcomes, educators and researchers are currently stressing the long-term or persistent effects of achievement, knowledge, and critical thinking ability. Moreover, the psychological/cognitive cell is being linked to the cognitive/behavioural cell; this is primarily due to explicit efforts to make schooling more relevant and effective in relation to career development. Given that the cognitive/behavioural cell refers to subsequent educational and career attainment (after secondary school), this category lends itself to an examination of long-term student outcomes.

TABLE 3.1

CLASSIFICATION OF STUDENT OUTCOMES BY TYPE OF OUTCOME AND TYPE OF DATA*

OUTCOME

Data	Affective	Cognitive
Psychological	Self-concept Values Attitudes Beliefs Achievement drive Satisfaction with school	Knowledge Critical thinking ability Basic skills Special aptitudes Academic achievement
Behavioural	Personal habits Mental health Citizenship Interpersonal relations	Career development Level of educational attainment Vocational achievements Level of responsibility Income Awards

* Based on a classification developed by Astin (1983).

The psychological/affective cell consists of somewhat more subtle or "softer" student outcomes and refers to the kinds of attitudes students form while in school. These outcome areas, while difficult to assess, are important to evaluate. For example, researchers have noted that self-perception of achievement and psychological lack of fit are strongly correlated with student attrition. Moreover, these factors are also associated with the socio-economic and cultural backgrounds of students. Given Ontario's multicultural composition, we strongly suggest the need to analyse student outcomes in terms of social/cultural subgroup differences. Given the cultural diversity of the province, special attention needs to be given to how curriculum planning (in relation to school outcomes) takes such diversity into account. Moreover, explicit models that relate cultural diversity, curriculum, and student outcomes have not yet been formulated. Should such models be developed, how widely applicable would they be given economic, regional, and socio-cultural variation across the province?

The behavioural/affective outcomes are infrequently assessed or studied by educators. These factors are usually long term and, though of particular interest to researchers, are again difficult to assess. However, for educational institutions whose mandate includes the full development of students as individuals and effective citizens, an assessment of these outcomes remains an ultimate test of success. Moreover, given the increased popularity of life-long, recurrent or adult education as a general value orientation, persons are less likely to sever their connection with school at a relatively young age. Thus, the need for long-term studies of the affective/behavioural cell is pressing.

The classification presented in table 3.1 is helpful in identifying types of outcomes but tells us little concerning the causes of such outcomes. In general, causal explanations of learning (and, by extension, of other student outcomes) involve factors outside the school and inside the educational system as well as those of the learner and the learner's environment. However, the stress placed on the different factors varies so considerably depending on the particular model that further discussion of determinants will be reserved for a later chapter.

B. RELATIONSHIP OF THE OUTCOME TYPOLOGY TO EDUCATIONAL GOALS

The OSIS Goals of Education

The circular Ontario Schools: Intermediate and Senior Divisions (OSIS) sets out the goals, policies, and requirements that govern the program in the Intermediate and Senior Divisions of Ontario schools. The broad goals of education for Ontario (thirteen in all) are listed in section 1.3 of the OSIS document. These goals (or desired student outcomes) reflect the policy of the province of Ontario that the "program in the publicly supported educational system should be designed to provide the greatest possible opportunity for every student to develop as completely as possible his/her abilities and interests and to meet each student's special needs" (1981, 2).

Table 3.2 presents these educational goals classified in terms of the student outcomes typology presented in table 3.1. While the goals are fairly evenly distributed across the cells of table 3.2 the reader should note that the largest number of goals are found in the psychological/affective cell or the cell consisting of "softer" student outcomes.

TABLE 3.2

CLASSIFICATION OF OSIS GOALS OF EDUCATION IN TERMS OF STUDENT OUTCOMES CLASSIFICATION TYPOLOGY

	Outcome	
Data	Affective	Cognitive
Psychological	1. responsiveness to dynamic processes of learning	2. resourcefulness, adaptability, creativity in learning and living
	5. satisfaction from participating in forms of artistic expression	3. basic knowledge and skills needed to comprehend and express ideas through words, numbers, and other symbols
	6. feeling of self-worth	
	10. esteem for customs, cultures, beliefs of a variety of societal groups	7. understanding the role of the individual within the family and the role of the family within society
	11. skills and attitudes leading to satisfaction and productivity in the work world	
	13. values related to personal, ethical, and religious beliefs and the common welfare of society	
Behavioural	4. physical fitness and good health	8. skills that contribute to self-reliance in solving practical problems in everyday life
	9. sense of personal responsibility at the local, national, and international levels	11. skills and attitudes leading to satisfaction
	12. respect for environment and commitment to wise use of resources	

Goals of Education in Ontario School Boards

Ontario boards of education have a great deal of autonomy with respect to supplementing, extending, and implementing ministry policy. It is therefore interesting to look at preferred educational outcomes at the board level.

During interviews with education officials (see chapter 7), respondents were asked if their board had its own set of goals or objectives. A copy of these materials was requested from those responding affirmatively. For each document received, an attempt was made to match its specific statements with the thirteen OSIS goals. Several points can be made from examining the results of this alignment; these are presented in table 3.3.

Most boards have their own sets of objectives and these goals generally reflect the OSIS goals. In about 20 per cent of the cases, the board's goals were either identical to the OSIS goals or a somewhat reordered subset. In most other cases the goals were simply rephrased and therefore easily matched to the OSIS document. Quite often, with a bit of subjective interpretation, goals that were in essence parallel to one of the thirteen OSIS goals, could also be labelled. In only eight situations were the goals expressed either too general for matching, or not at all related to educational objectives for students. For example, several documents contained statements relating to community relations, teaching standards, or organizational guidelines for board operations.

TABLE 3.3

BOARDS OF EDUCATION INCORPORATING
OSIS GOALS OF EDUCATION

	Goal	No. of Boards with Goal	% of Total (51)
1.	Develop a responsiveness to the processes of learning	38	75%
2.	Develop resourcefulness, adaptability, creativity in learning and living	29	57%
3.	Acquire basic knowledge and skills - words, numbers, etc.	38	75%
4.	Develop physical fitness and good health	36	71%
5.	Participating, sharing in various forms of artistic expression	23	45%
6.	Develop a feeling of self-worth	40	78%
7.	Develop understanding of role of individual within family and role of family within society	16	31%
8.	Acquire skills that contribute to self-reliance	14	27%
9.	Understanding of social order, respect for law, rights of others	37	73%
10.	Develop esteem for customs, cultures, beliefs - Native people, French Canada	30	59%
11.	Acquire skills, attitudes leading to satisfaction, productivity in the work world - flexibility, habits	19	37%
12.	Develop respect for environmental resources	23	45%
13.	Personal, ethical, religious morals, values	39	76%
	Total School Boards Interviewed	88	
	School Boards with Goals	76	
	Goal Documents Received	59	
	-unable to match with OSIS	18	
	TOTAL	51	

A few of the documents examined contained clear goals or objectives that went beyond the OSIS goals. For example, some boards stressed objectives that were related to the exceptional child, religious identity, the education continuum, or the interweaving of education, government, and industry. A final type of situation uncovered was documentation of very specific objectives, such as the increase of computer skills, that could not reasonably be classified as one of the general OSIS goals.

It is interesting to note that while not one of the thirteen OSIS goals was repeated 100 per cent of the time, goal six, "develop a feeling of self-worth", was replicated in 78 per cent of the board documents. Other goals mentioned by three-quarters of the boards include the development of values, responsiveness to learning, and the acquisition of basic knowledge (goals 13, 1, and 3 respectively).

Three goals, those pertaining to the family, self-reliance, and the world of work, stand out as being mentioned least often. Taken together, the results suggest a concentration on affective student outcomes.

CHAPTER FOUR

SOCIOLOGICAL MODELS OF EDUCATION

Sociologists have formulated a variety of theoretical models in their attempt to explain the relationship of education, schooling, and societal institutions. Some models (e.g., structural functionalist, conflict) are directed at problems at the macrosociological level while others (e.g., interpretive) have sought to provide "new" directions, emphasizing content or curriculum in education and the internal operation of schools. Our intention is to review theoretical models, point out their strengths and weaknesses and discuss the research methodologies associated with these models. In chapter 8, we evaluate the feasibility and utility of producing a synthesis of models.

In the previous chapter immediate, intermediate, and long-term educational outcomes were defined and classified in a typology. Educational goals were also related to this typology. Such typologies are useful in that they reveal basic relationships and patterns among a complex assortment of outcomes and goals. They also establish that "outcome" is a multidimensional term that can be conceptualized in a number of different ways. OSIS provided the broad educational goals or content for the typology. By classifying these broad goals we were able to reveal that the OSIS document emphasizes the cell consisting of "softer" student outcomes.

The literature review of sociological models of education will extend this analysis in two major ways. First, each model (and the research generated by the model) highlights certain outcomes and provides a well conceptualized rationale for researching those outcomes. Second, theorists and researchers who employ these models also identify causal factors that are related to the specified outcomes.

A number of important questions are considered in this review of sociological models of education. What school outcomes are emphasized by each model? Conversely, what outcomes are neglected? What insights about outcomes and causes do these models generate concerning the function of schooling in modern, multicultural Ontario? Are insights offered relating to the ease or difficulty in achieving school outcomes and broad education goals? While it is beyond the scope of this report to provide detailed responses to each of these questions, the conclusions and recommendations offered in chapter 8 suggest strategies for developing answers on a long-term basis.

Before we embark on a complex voyage that will pass through the three main models of education formulated by theoretical sociologists, namely structural functionalism, conflict theory, and the interpretive paradigm, it is important to distinguish between an individualistic and sociological perspective in the description and explanation of human behaviour. An example related to school outcomes should clarify this distinction. Educators frequently employ such labels as "disadvantaged" or "socially deprived" in accounting for a child's failure to learn in school. Note that the stress is on "the child's failure". This locates the problem in the individual rather than outside the individual. Sociologists, on the other hand, would automatically seek to explain human conduct (in this instance, the child's failure) in terms of the various social institutions and structures that impact on the child. These institutions and structures can be seen as comprising an intricate set of roles and expectations. How people play at these roles results in social reactions that have important implications for one's self-image.

Sociologists have tended to de-emphasize the existence and importance of inborn or instinctive traits. Rather they seek to understand value acquisition (e.g., "success", "competition", "achievement") through processes of socialization. Through socialization, individuals learn societal priorities and how to play out social roles. As Western societies moved from a pre-industrial agricultural phase to a post-industrial or service phase, schools became increasingly important in aiding young persons to make the transition to adulthood. Hence, educators and especially sociologists interested and involved in studying education became influential in detailing the relationship of educational institutions, society, and the individual.

To a very large extent, the discipline of sociology (and the sociology of education as a sub-discipline) has been infused by a social stratification perspective. As Collins (1982) indicates, sociology's great strength lies in its potential for penetrating the superficial observation of everyday life and finding the fundamental social processes hidden beneath. One consequence of penetrating social life is to reveal that social inequality and the various bases of social stratification are vitally important for understanding the relationship of social institutions, society, and the individual. Mifflen and Mifflen (1982, 7) explain that these inequalities manifest themselves in unequal rates of academic achievement, formal educational attainment differences, and unequal life outcomes for those persons with similar amounts of schooling.

Of the three major sociological models of education mentioned previously, the structural functionalist and conflict models have most explicitly addressed the complex association of schools, society, and the individual. It should be emphasized that the fundamental difference between the functional and conflict perspectives is their ideological position. Functionalists generally accept the present framework of society and are concerned with the types of education required to sustain modern society. At the same time they recognize that there are obstacles to achieving those goals but feel that modest reforms can remove them. Conflict sociologists do not accept the present system. They object to the high price we pay for promoting elite interests and see the "social control" and "cultural reproduction functions of education" as major obstacles to achieving equality in educational and life outcomes. These differences should be borne in mind in reading the detailed treatment of functionalist and conflict models that follows.

A. THE STRUCTURAL-FUNCTIONAL MODEL: GENERAL PRINCIPLES

Structural functionalism is not clearly identified with any single source but primarily grew out of a general trend toward functionalist analysis in the nineteenth century. As such, structural functionalism is more a school of thought than a single theory (Grabb 1984, 71). In sociology, its most influential writers have been Emile Durkheim, Talcott Parsons, Kingsley Davis, and Wilbert E. Moore.

While many writers have contributed to the school of thought known as structural functionalism, there is a general thread that runs through the writings of all functionalist scholars. Society is conceived of as a living organism, the parts of which are composed of institutionalized systems (of roles) called structure. Societal institutions (e.g., family, religion, education, economy) work in close conjunction so that the needs of all can be achieved.

The concept "function" refers to the "satisfaction of a need, requisite or imperative for survival or equilibrium of a system" (Murphy 1979, 9). "System" is an abstract concept that can describe, at the most general or macro level, societies, or at the micro level, specific organizations (e.g., schools). At times, "function" has been used synonymously with "intended purpose" or "stated goal"; at other times, function refers to the "unintended consequences" that result from the activities of a social institution (Grabb 1984, 92). Most structural functionalists agree, however, that a function is a social task, or an activity that must be adequately performed if social groupings are to exist and sustain their members. These tasks may include a wide range of operations including socialization and education of youth, administration of economic and political affairs, and so on.

Society is viewed by functionalists as a type of organism that is basically stable. While not denying the possibility of instability, functionalists ask "how is social order possible?" and assume that every society tends towards "equilibrium" or "homeostasis" (Mifflen and Mifflen 1982, 43). Although stability is challenged by a constantly changing world (producing dysfunctions) that moves society and social institutions away from equilibrium, the presence of institutionalized roles or culturally accepted patterns of behaviour acts in the long run to maintain stability. Indeed, social order is seen as solidly rooted in the equilibrium of interdependent parts of the system.

The process of socialization particularly as it occurs in schools is fundamentally important for maintaining equilibrium. Stability depends on the acceptance by societal members of basic social and cultural values. As we moved into a post-industrial phase of development the role of the family (in terms of imparting basic skills and related values in the transition to work) diminished and schools were vested with additional tasks and responsibilities. One very crucial responsibility was to sustain value consensus among a growing and increasingly heterogeneous or multicultural student body (Mifflen and Mifflen 1982, 43-44).

Structural-Functionalism and the Sociology of Education

Murphy concludes that the sociology of education has focused on several principal themes that roughly relate to different versions of functionalism (1979, 18). The first theme concerns the role of formal education in the evolution of industrial societies from particularism and ascription to universalism and achievement. A second theme focuses on the dysfunctions of the operation of schools for large groups in society. It examines the way schools, in conjunction with other parts of the social system, function to reproduce inequalities. A final theme concerns the relative independence of different dimensions of inequality and therefore the ineffectiveness of school reform for promoting a more egalitarian society. Although the debate concerning this issue has been largely on an empirical level, it is related to Gouldner's version of functionalism, which stresses the investigation of the relative functional action of the parts of a social system. While it would be well beyond the scope of this project to review all of these works, a selective discussion of how specific writers further our understanding of school and life outcomes will prove most instructive.

Talcott Parsons was without doubt the most famous advocate of functionalism in sociology and had one of the most important influences upon the sociology of education. Parsons presents a view of education in which schools primarily function to lead the child from a particularistic to a universalistic, and from an ascriptive to an achievement, orientation. Additionally, schools act to select and differentially allocate students to unequally rewarded adult roles (Mifflen and Mifflen 1982, 45). Parsons states that "in American society there is a very high, and probably increasing, correlation between one's status level in the society and one's level of educational attainment" (Parsons 1959, 301). Insofar as social status and educational level are related to occupational status, success in occupational attainment becomes linked to educational achievement (Scimecca 1980, 7). Although Parsons does discuss the influence of social class on selection and school performance, he genuinely believes that the selection process is fair and that the "differentiation that occurs during elementary school takes place on the single main axis of achievement" (Parsons 1959, 301).

The relationship of academic success in school, educational attainment levels, and occupational status became embodied in the "human capital" theories developed by classical economists, and in forms of technological functionalism that attracted many sociologists in the 1950s (Karabel and Halsey 1977, 13). Kingsley Davis and Wilbert E. Moore formulated a classical functionalist theory of social stratification based on the technical skill requirements for modern occupations. They assert, by way of illustration, that "a medical education is so burdensome and expensive that virtually none would undertake it if the M.D. did not carry a reward commensurate with the sacrifice" (Davis and Moore 1945, 244). According to Lennards, there are four basic tenets contained in technological functionalism. They are: (1) the skill demands of occupations are constantly increasing; (2) talented people need to be recruited to occupy these more highly skilled jobs; (3) the educational system is the most likely site where the selection and training of talent can occur; and (4) rising skill requirements for jobs require an expansion of the education system. These educational requirements reflect the functional needs of the occupational structure whereby employers evaluate the skill level associated with specific jobs and set the educational entrance requirements accordingly (1980, 498).

The technological functional model suggests the instrumental importance of education (especially the cognitive content of education) in securing a rewarding occupational position and its priority in this process over family background (Persell 1977, 153).

The social mobility studies conducted by Blau and Duncan (1967) significantly influenced American social theory insofar as they suggested that education was instrumental in securing occupational position. Moreover, they claimed that education was more influential in this process than family background.

Blau and Duncan's now classic book The American Occupational Structure (1967) was primarily concerned with the question of occupational mobility and included considerable material on the role played by education in the intergenerational transmission of inequality. It should be noted that the importance of this study resided not only in its substantive findings. Duncan also introduced a sophisticated form of multiple regression (i.e., path analysis) that subsequently and powerfully influenced the direction of research in the sociology of education within the United States. This development has been less influential in Canadian circles.

In the final chapter of their book Blau and Duncan conclude that their data support Parsons' functional theory of a general move from "particularism" to "universalism" with a correlative movement from "ascription" to "achievement". However, Karabel and Halsey (1977, 18) re-examine their data and find reason to seriously challenge their conclusion. If the theory works, they surmise that there should be a diminishing correlation through time between parental and filial occupational status. The data presented by Blau and Duncan do not appear to warrant this conclusion. Moreover, Blau and Duncan's data do not permit a measure of how much occupational mobility occurs irrespective of changes in the occupational structure. This makes it exceedingly difficult to evaluate Parsons' assertions of a movement from ascription to achievement (Karabel and Halsey 1977, 19).

Blau and Duncan's innovative methodology led to a veritable explosion of writing and research on the status attainment process. Kerchoff claims that "By introducing the fundamental conceptualization of a process of individual attainment, multivariate models were made possible in which intervening variables are viewed as mediating the effects of antecedent factors on consequent outcomes. The methodology of path analysis also made it possible to add variables almost indefinitely to the models" (1984, 141).

It was William Sewell and his colleagues at the University of Wisconsin who produced the most influential elaboration of the basic status attainment model. Ultimately known as "the Wisconsin model", it added important social psychological variables (e.g., influence of others, educational and occupational aspirations, self-concept) to the Blau and Duncan model. The Wisconsin model introduced these mediating social psychological variables in an attempt to show the mechanisms by which the effects of origins on educational attainment were actually transmitted. In other words, how do origins affect educational attainment? Kerchoff (1984, 142) rightfully indicates that the Wisconsin model is a socialization model that employs socialization theories to structure a model of the attainment process. Variables such as ambition and the influence of significant others play a prominent role in the model. However, the individual's mental ability and academic performance in school are also included and contribute significantly to the model's strength.

As studies employing the Blau and Duncan and Wisconsin models proliferated, so did critical commentary. Critics assert that the status attainment model sees occupational attainment only as a product of supply (individual characteristics of job holders) and not of demand (characteristics of the labour market) (Horan 1978, 538). As Grabb (1984, 99) points out, this captures a basic distinction between class analysts (e.g., Marxists) and stratification analysts, the former concentrating on relational consequences of inequality and the latter on distributive inequalities. What Coser and other critics of the status attainment paradigm were saying was that, in explaining the distribution of individuals along a continuum of educational, occupational, or income attainment, it cannot be assumed that the society is homogeneous. There are important group inequalities, primary and secondary labour markets, and so on. Thus, there will not be a perfect match of individual qualities to occupational positions and other societal rewards.

These criticisms have led some researchers to incorporate class (relational) categories and other structural variables in a revision of the Wisconsin model (Kerchoff 1984, 144). Harvey and Blakely, in assessing the Canadian literature on transition from school to work, conclude that there have been declining returns to education in the late 1960s and into the mid-1970s and that this trend has continued into the 1980s. To explain this trend, researchers must extend the traditional status attainment model and include relevant structural factors such as general unemployment rates (Harvey and Blakely 1985, 16-17).

It should be mentioned that the capacity of the Wisconsin model to handle relational aspects of stratification has been recently facilitated by refinements in statistical techniques. Log-linear analysis is an improved method of analysis of tabular data by which hypothetical mobility tables may be compared with observed mobility tables. This technique allows researchers to evaluate the "goodness of fit" between theory or model and actual mobility patterns (Kerchoff 1984, 146-147). Furthermore, the development of "linear structural relations" (LISREL), the analytic approach of Joreskog and Sorbom (1979), permits the use of multiple indicators (of a concept or variable) and hence increases the reliability of measurement. A reliance on single measures in developing complete status attainment models has been a major basis of criticism in the past.

In the mid-1960s and 1970s, a number of large-scale empirical studies were conducted in the United States and Canada. These studies served to identify the obstacles faced by young people in achieving important educational goals (Coleman 1966; Jencks 1972; Porter 1979).

James Coleman, after completing a major U.S.-wide study in which he surveyed 645,000 pupils, revealed that "within school" differences in achievement were greater than "across school" differences. What seemed to matter most was not the facilities or quality of schools but the students' home backgrounds prior to entering school. Coleman's report spells this out rather bluntly:

> Schools bring little influence to bear on a child's achievement that is independent of his background and general social context;... this very lack of an independent effect means that the inequalities imposed on children by their home, neighborhood and peer environment are carried along to become the inequalities with which they confront adult life at the end of school. For equality of educational opportunity must imply a strong effect on schools that is independent of the child's immediate social environment, and that strong independent effect is not present in American schools (1966, 325).

In a subsequent analysis Jencks (1972) employed highly sophisticated statistical techniques to debunk the functional wisdom concerning the interrelationship of inequality in educational opportunities, cognitive skills, educational credentials, occupational status, income, and job satisfaction. He demonstrated, for example, that school success is only a modest determinant of adult success. John Porter (1979), Canada's best known sociologist, responded to the works of Jencks, Bowles, and Gintis and altered his personal thinking from that of a technical functionalist to a more "critical" functionalist. Porter and other Canadian functionalists acknowledged the serious impact of social and cultural disadvantages on achieving success within the educational system and, subsequently, in the labour force. However, they adopted a reformist approach, arguing that change is possible within the present framework of society, and that strategies can be developed to remove obstacles to success in school (Murphy 1979, 81-82).

The Functionalist Model in Relation to School Outcomes: A Summary

The functional model views schooling as a rational mechanism for sorting and selecting talented persons in societies that are becoming increasingly complex and "expert". Schools are expected to provide both the cognitive skills and consensual (democratic) values essential to the smooth functioning of a complex industrial society. As societies become increasingly post-industrial in nature, they also demand sophisticated cognitive skills for their population; this is necessary for equilibrium to be maintained. At the same time, societies move in a fundamentally progressive direction, seeking to solve problems of intolerance and resolving problems of inequality and social injustice.

At the heart of the functional model is what the adherents of the model see as the unique character of the modern Western world. There are three crucial aspects to this conception. First, in modern societies occupational roles are achieved rather than ascribed. Modern society is meritocratic, where ability and effort count for more than privilege or inherited status. Functionalists are morally wedded to this premise in the sense that they believe that achievement is a far more rational device for allocating status or prestige than ascription. Indeed, the complexities of a modern industrial and occupational structure demand that the most talented individuals be recruited for the positions. Second, modern society is seen as an "expert" society that depends on rational knowledge for economic growth, with an increase in highly trained personnel to fill the majority of occupational positions. This conception emphasizes the "learning society" or "lifelong learning" where schools function to teach people how to learn rather than exclusively to teach specific useful vocational skills. Third, contemporary society is portrayed as a democratic society or a society in which we move towards the achievement of humane goals (e.g., social justice, a more fulfilling life, multiculturalism). Implicit is a politically liberal perspective, the core assumption being that increased years of formal education will bring about this "just" society.

The more critical functionalists concede that the social selection processes operating in schools are not perfectly meritocratic. They agree (and even protest) that large numbers of talented but disadvantaged groups do not enjoy educational opportunities equal to those enjoyed by more privileged groups. All functionalists agree (at least in earlier times) that further expansion of schooling would bring us closer to a society of equal opportunity.

For the most part the talent identified in and nourished by schools is one dimensional, that is, it underlies "success" in school and "success" in life. The problem of inequality in contemporary society is one of erecting barriers to the mobility of talent. Human capital theorists (the parallel view of classical economists) assume the relationship between educational achievement and occupational status is rational and see an "investment" in human capital as paying off in future "dividends".

The functional model views the school as a focal socializing agency that accepts the existing arrangements in society (including the social stratification system, values, and differentiated roles) and transmits those values and diffuse skills necessary for maintaining societal equilibrium. Teachers and administrators are conservative agents of the community, vested with the responsibility of preparing students to enter the larger society without affecting or disturbing existing structural arrangements. While functionalists recognize that schools are frequently not functional for all students (e.g., ethnic and racial minorities, economically disadvantaged, linguistic minorities), improvements in the socialization process through curriculum reform, better training of teachers or improved communications with students can minimize these "dysfunctions".

B. CONFLICT MODELS: GENERAL PRINCIPLES

The functional model was the dominant theory in sociology throughout the 1950s and to a large extent the 1960s. Given the changing social and political times and a rapidly developing educational research base, this perspective increasingly came under scrutiny and attack. As Karabel and Halsey noted, during the 1960s there was increased antagonism between classes, races, and nations. The rise of a New Left that was disproportionately active in some universities signalled a dramatically different social and political outlook. This gave added impetus to the development of conflict theory (1977, 28-29).

Before we explicate the conflict model it is useful to summarize the four major difficulties with the functional model. First, functionalism is basically a conservative justification of the status quo. Given the focus on an integrated system tending to equilibrium, the model deals poorly with rapid social change, concentrating rather on the preservation of social order (Murphy 1979, 49-50). An identification of "dysfunctions" in the system leads functionalists to posit reforms (e.g., compensatory education) rather than fundamental structural changes to the system itself. While it may be true that functionalists are "blind" to the pervasiveness of conflict in societies, it may be too simplistic to categorize them all as conservative. For example, Jencks, Porter, Bourdieu, and Perrenaud have all been highly critical of the status quo (Murphy 1979, 50).

Second, functionalism suggests a central assumption of a consensus of values in any society. Those that employ an "organizational effectiveness" framework must assume that there is fundamental agreement on the goals and objectives of education. Within any school board, or for that matter any school, it is unlikely that teachers, administrators, and students clearly perceive the "goals of society". If they do perceive them, there is a great likelihood that disagreement rather than consensus will characterize the thinking relative to values (Selakovich 1984, 5-6).

Third, the functional model was developed on the basic assumption that the cognitive skills produced in schools provide a crucial bridge between education and occupations. A growing research literature forms a basis for challenging this assumption. For example, studies that focus on the relationship between university grades, occupational status, and future earnings reveal no discernable relationship (Hurn 1978, 38). Critics charge that it is educational credentials rather than the acquisition of cognitive skills that predict future occupational status and earnings. As Porter notes "we find with credentialism yet another example of how the expansion of public education has the unanticipated consequence of bringing a new form of inequality rather than reducing the existing structure of inequality" (1979, 269).

Fourth, the functional model presents the meritocratic argument that schools should sort and select talented persons on the basis of achievement rather than ascribed characteristics. With the expansion of education (particularly higher education), the role played by ascription should have diminished while the influence of achievement should have increased. This promise has not yet fully materialized. Canada compares favourably with other nations with respect to postsecondary participation rates and both women and ethnic minority groups have increased their participation in university. At the same time, educational expansion has not measurably reduced social class differentials in university attendance (Anisef 1985, 3).

The attack on the liberal and rational model of society as developed by functionalists crystallized in the later 1960s and 1970s. Cynicism grew concerning the benefits of science and technology and the good intentions of those in established authority positions. The new more sceptical vision saw greedy business corporations intent on destroying the environment, cynical and corrupt politicians concerned with their own power and privileges, and entrenched racism and sexism in virtually every social institution. Instead of a model of society where authority was based on expertise and competence, this radical vision defined a society where powerful elites manipulate public opinion to preserve their own entrenched position (Hurn 1978, 45).

This radical shift in conceptualizing society also implied a more sceptical or cynical interpretation of what schools teach and their role in the larger society. Schools were increasingly seen as institutions where a middle-class mentality prevailed and a narrow technocratic vision of the world was taught. Successful students were those that effectively learned the bureaucratic rules; they were not necessarily more intelligent or creative. The failure of schools and schooling is inevitable in this conception. Contemporary capitalist society demands a social order characterized by repression and the maintenance of inequality. Defects in schooling thus can not be "cured" by socialization reforms in that schools reflect the repressive nature of the society in which they are located.

Marxist and Weberian Challenges to the Functionalist Model

The radical challenge to the structural-functional model of education is generally referred to as "conflict" theory and contains two major sub-theories, that is, Marxist and Weberian. However, as Selakovich explains, the division between structural-functionalist and conflict theorists is not as wide as one might think. Conflict theorists tend to agree that the structural-functional model is an accurate description of Western society. Their argument is with the values of society: they believe them to be wrong. They are not the values of economically and culturally disadvantaged people but rather those of the rich and powerful (Selakovich 1984, 7).

The essence of Marx's position was stated in his Communist Manifesto: "the history of all hitherto existing society is the history of class struggle." And, for Marx, class is to be defined in terms of a society's system of economic organization or mode of production. The most important difference among groupings of people involved in the productive system is between those who own and control property and those who do not (Grabb 1984, 20). Marx conceived of all capitalistic societies as involved in a basic struggle between two classes (the bourgeoisie and the proletariat). In fact, social change or development historically has never occurred without this sort of antagonism. His theory then conceptualizes society as an arena in which "haves" and "have-nots", "oppressor" and "oppressed" are pitted against each other in a basic or elemental struggle.

Like Marx, Weber saw society as consisting of an assortment of conflicting interest groups but, unlike Marx, he believed that the struggle for advantages can take more than one form. Weber asserted that in addition to power stemming from economic class position, there is a range of non-economic social forces that cannot be dismissed as merely secondary or determined by economic forces. There are multiple social and cultural forces at work that influence human behaviour, and single-factor theories (e.g., Marxism) tend to oversimplify social reality (Grabb 1984, 40).

Weber identifies "status power" as an additional factor that can lead to conflict among status groups (that is, groups having a strong sense of fellowship). Status power is a function of one's position in the cultural order and is acquired by monopolizing the possession of particular cultural attributes. These attributes are then employed as a basis for establishing moral superiority. Subsequently, status groups are formed and a distinctive way of life (e.g., task, manners, opinions) are created. This then serves to differentiate status groups from one another and becomes a mark of social distance and exclusiveness (Lennards 1980, 499).

Randall Collins is a neo-Weberian who works with Weberian ideas and presents a conflict interpretation of the role of education and how schools function to contribute to status power and conflict. "In an explicit attack on the functionalist theory of educational stratification, he argues that the expansion of the American educational system reflects less the growing technical needs of the economy than the effects of competing status groups for wealth, power and prestige" (Karabel and Halsey 1977, 31).

In his book The Credential Society, Collins attacks the "myth of technocracy" as formulated by technical functionalists. This myth implies that jobs in modern society are rapidly becoming so sophisticated and complex that only people with high levels of cognitive development can perform them adequately. Collins rejects this argument for a number of reasons. First, educational expansion over the past century has far outstripped the expansion of highly skilled and professional occupations. Second, research makes questionable the assumption that contemporary jobs are more complicated than similar jobs several decades ago. Collins cites studies on job complexity that show very small changes in the skills required to perform the most common occupations, with only a minority of technical jobs clearly requiring more cognitive skills than in the past. Third, there is little evidence to support the notion that employees benefit from school training; those trained on-the-job are no less productive than those who receive extensive formal education. Fourth, contrary to what technical functionalists tell us, schools are extremely ineffective institutions for the production of cognitive skills (Hurn 1985, 68-69).

If schools do not excel in teaching cognitive skills, what exactly do they teach and how do they function relative to the larger society? According to Collins, schools teach middle-class standards of taste and manners, that is, status culture. In fact, history documents that the major function of schooling has been the teaching of status culture rather than useful skills (Hurn 1985, 69).

In modern society, employers and educational institutions have vested interests in raising levels of educational qualifications. Education then becomes a form of "cultural currency" (Collins 1979, 60-62), a term that focuses attention on the quantity of schooling (e.g., diplomas, degrees) rather than the content of what is learned. Like money, credentials are used to purchase desirable occupations. As educational credentials become inflated with rapid educational expansion, their relative value decreases. Competition for desirable occupations then exerts pressure to increase the quantity of credentials required by employers. The resulting "credentialing society", according to Collins, is irrational and wasteful. Minority groups increasingly suffer in the struggle for dominance and prestige, and individuals will increasingly perceive a mismatch between the credentials required to obtain desirable jobs and the actual cognitive skills that are needed to perform such jobs.

It is interesting to note that Collins' detailed critique of education is consistent with Illich's more general and doctrinaire approach in Deschooling Society (1971). Illich maintained that schools were oppressive and monopolistic instruments in both capitalistic and socialistic societies. In today's society schools serve to manipulate people in ways that optimize specialization and consumer orientation. Schools essentially repress the interests of the masses and almost exclusively serve the interests of the elite (Husen 1981, 26). Schools tend to create the need for more schooling and promote the myth that only knowledge transmitted by schools is valuable. The hidden curriculum of schools socializes students to the values of bureaucratic and productive society and consists largely of "packaged values". Thus the curriculum is destructive of humanistic values and of real learning itself (Selakovich 1984, 10).

Collins' model of education as an attribute of status culture stands as one challenge to the functionalist perspective. A second and better known challenge is presented by Bowles and Gintis. As Marxists, Bowles and Gintis believe that it is crucial to understand the workings of the educational system in terms of the class structure in which it is embedded. Their 1976 book, Schooling in Capitalist America, is probably the most coherently organized Marxist interpretation of schooling in contemporary Western society.

Their central thesis is that schools serve the interests of the capitalist order in modern society. In fact, schools "reproduce" the values, attitudes, and personality characteristics required in a repressive capitalist society. Students are educated to support these values rather than critically evaluate them. Like Randall Collins, Bowles and Gintis unleash an attack on the technical functional model, particularly the meritocratic component of the theory. They argue that cognitive abilities as measured by IQ are not a crucial factor in determining economic or life outcomes. Using sophisticated statistical analyses (e.g., regression techniques) they show that the role of IQ in the transmission of intergenerational inequality is, at most, quite trivial (Karabel and Halsey 1977, 34). It is primarily social class that determines success or failure in school and in later life. Two major principles are introduced to explain how schools operate to reproduce inequalities along class lines -- the correspondence principle and legitimation.

Bowles and Gintis assert that there is a "correspondence" between the nature of the workplace and that of the school. By way of illustration, pay is an incentive in the workplace while grades are a parallel incentive in schools. Also, the social relations of the school include a value system that stresses respect, authority, conformity, and competition. Such relations emphasize qualities that are crucial for success in the workplace. The result is that students are socialized in schools to fit eventually into the occupational world. This correspondence operates along class lines. For example, lower level workers may perform tasks requiring little discretion and responsibility and their work is closely supervised. Correspondingly, discipline among vocational students tends to be strict; punctuality and rule following is emphasized. In contrast, higher level workers have to be flexible and work autonomously without direct supervision. This closely corresponds to the social atmosphere created in a university oriented program (Lennards 1980, 501).

Schools tend to treat students of varying social origins differently, reinforcing class-based personality characteristics. It is these latter traits rather than cognitive differences that explain why children of the privileged tend to occupy higher occupational positions. (Karabel and Halsey 1977, 34). Insofar as the great majority of occupations in modern society, Bowles and Gintis believe, require a loyal and compliant work force, most schools tend to focus on teaching students how to follow orders reliably, to respect authority and be punctual (Hurn 1985, 65).

If the inequality created by the class-based "correspondence" principle is not to result in social havoc and protest, legitimation (the second principal function of schooling) is required. Legitimation refers to a process whereby students (and the public at large) become convinced that the system of allocation employed by schools is just and necessary. The general population becomes convinced that selection for particular school tracks is made on the basis of ability and intelligence. These "objective" criteria mask the fact that success in school and later life is closely related to social class (Hurn 1985, 66).

Boxles and Gintis' Schooling in Capitalist America also provides a most convincing application of neo-Marxist theory in the explanation of the rise of compulsory education in the United States in the nineteenth century (Hurn 1985, 88). U.S. educational history is reinterpreted from a radical revisionist perspective and the liberal interpretation of schooling (that is, the effective use of schools to create greater equality of opportunity) is challenged. Bowles and Gintis provide evidence, for example, that compulsory schooling was directly related to the factory mode of production and not to urbanization or even economic growth (Hurn 1985, 89). In Canada, Shecter (1977) has attempted, in a similar manner, to explain the structure of public education in terms of the history of class struggle. In particular, Shecter deals with the changing high school program structure between 1890 and 1972 and argues that changes should be understood as a response to the contradictions of capitalism and a product of class conflict. One can add the names of Michael Katz, Colin Greer, and Joel Spring to a growing list of radical historians of education who have focused on conflicts over the structure of the educational system with its attendant consequences on the content of education. These sorts of analyses alert us to the value of an historical perspective in examining educational change and, in particular, to changes in school outcomes resulting from structural alterations in the educational system (e.g., OSIS).

C. A COMPARISON OF FUNCTIONALIST AND CONFLICT MODELS

The degree and nature of the similarities and/or differences between the functionalist and conflict models in the sociology of education depend largely on who you read. Karabel and Halsey (1977, 34) emphasize differences when they claim that "the Marxist formulation of schooling and inequality differs radically from the functionalist theory of educational stratification". Below we evaluate both differences and similarities in approach. The discussion draws heavily on analyses by Lennards (1980) and Hurn (1985).

Differences

Social Stratification Role of Education

Education is viewed by technical functionalists as an all important instrument of social mobility in an essentially meritocratic society. Selection in this view is based on universalistic and objective criteria (e.g., academic performance). In contrast, the conflict model stresses the role of education as a means of social class reproduction, mirroring domination structures in the larger capitalist society. Students are taught the necessary values and acquire personality traits that will serve them well when they accept their future class position (e.g., status socialization). Insofar as selection criteria favour the cultural capital of privileged or advantaged groups, schools inevitably perpetuate the inheritance of social advantage.

Common or Consensus Values

The transmission of core or consensus values is an essential element in functionalist theory. Modern society is technologically, socially, and culturally diverse and complex. For a society to develop a true sense of national identity and to sustain equilibrium, its schools must teach young people important values that they will come to share equally. This function of schooling is especially important in a multicultural society where many ethnic and racial groups bring (with them) diverse values. Neo-Marxists, while agreeing that schools are quite effective in transmitting these core values, disagree vehemently on motives. These core values are (or were) the values of capitalist elites and are imposed on the mass of the population. The stress on particular values in schools will be modified with changes in the capitalist economy. At present monopoly capitalism produces a demand for dependable workers or workers who have acquired an internalized labour discipline and who can also work effectively in large bureaucracies.

Needs or Interests

Technical functionalists see education as a basic strategy for attaining societal needs. How large the educational system grows and the content of its curriculum are determined by technical requirements for talent in an expert and meritocratic society. As societies change, so do functional needs. Society members and school educators may recognize these changes as requiring alterations in how schools should organize their curriculum and what teaching strategies would most effectively transmit new curricula. Neo-Marxists reject the teleological character of this "needs" argument. It is not impersonal needs that shape our institutions but the vested interests of capitalistic elites. As the character of capitalism alters from small-scale family run firms to larger corporations, the kind of schooling desired by elites also changes.

Equality of Opportunity

Functionalists have long maintained a strong faith in schools as a major vehicle through which equality of opportunity could be achieved. Schools were treated as "great equalizers" rather than sorters. Although recognizing a discrepancy between the ideal and the real meritocratic society, functionalists believe that such obstacles are in principle removable. Improvements in the delivery system of schools or improving the home/school connection can significantly decrease inequalities in educational opportunity (especially for those ascribed factors that produce unequal and lower academic achievement). Conflict theorists reject this possibility. Inequality of educational opportunity is as inevitable as the existence of class inequalities in the larger society. It is these latter inequalities that become translated into an internal stratification system within schools where certain cultural and class groups are going to be favoured over others. Only structured reforms of the society will ameliorate this situation. School reforms cannot make a significant dent in existing inequalities in educational opportunity.

What Schools Teach

Functionalists, in keeping with the meritocratic argument, believe that school is the primary institution where cognitive skills are effectively transmitted to young persons. In this way, school serves the function of preparing youth to make the transition to work. As societies increasingly moved into a post-industrial phase and occupational requirements became more technical and complex, education expanded to meet these changing societal needs. Conflict theorists challenge the generality of this argument. Whether the revolutionary growth in schools that occurred since the 1960s can be attributed to technological changes in our occupational structure is questionable. Only part of this educational expansion and its changing curriculum can be seen as an adaption to the changing demands of work. Collins suggests that the extraordinary growth in credentials results from status group competition or conflict. Neo-Marxists insist that schools do a much better job of developing noncognitive attributes (e.g., personality traits, docility) than of teaching cognitive competence.

Education vs. Schooling

Functionalists have stressed the importance of educational expansion as an efficient strategy for fostering liberal and humane values. Conflict theorists, on the other hand, would want to distinguish between the liberating potential of education and the repressive characteristics of schooling as it exists in capitalistic society. Given the stratification constraints under which schools operate, many cultural and economic minority groups perceive their education as anything but liberating.

Common Ground

The Education-Work Connection

Both functionalist and neo-Marxist models view the development and expansion of schooling in modern society as closely connected to the changing nature of work and industrialization. Although Collins posits status competition as a principal dynamic behind the rise in educational credentials he does concede that changes in the technical requirements of jobs have also contributed to the process. Lennards (1980, 510) indicates the importance of a "middle-ground": "Are well disciplined workers preferred, even if they are incompetent? Both cognitive and noncognitive factors play a role in educational credentialism. It is possible that cognitive competence is a 'threshold' value. Once employers can assume it is there, they will select on the basis of additional noncognitive criteria."

Equality of Opportunity

Both models of education stress the important role played by the demand for equality of condition and equality of opportunity in spurring the schooling revolution. While conflict theorists deny that mass education has produced the desired results, they place an emphasis equal to functionalists on how demands for democratization, whether realized or not, have shaped the expansion of education.

Role of Ideology

In large part, the "overdetermined" aspects of both models reflect the presence of strong ideological biases. To argue, for example, that schools are "repressive" or that youth need to be "liberated" reflects a neo-Marxist hostility to capitalism and a belief in the capacity of the working class to rid itself of "false consciousness" and create a fairer more just society. Functionalists, on the other hand, are wed to the premise that societies are built on consensus values and that a commitment to expanded schooling will result in humane and progressive development. Thus, ideological biases are present in both theoretical formulations and lead proponents to develop overdetermined accounts of school outcomes.

Autonomy of Schools

Both macrosociological models of education concede very little autonomy to schooling. Functionalists basically see what happens in schools as substantially determined by the technological requirements of society, and conflict theorists explain schooling in terms of the explicit interests of elites. This "black box" perspective assumes that schools as organizations do not have a life of their own. Rather they are passive transmitters of external influences. They need to respond or develop in ways that reflect the impact of powerful industrial or work forces.

D. THE INTERPRETIVE MODEL

The interpretive model is the most difficult model to describe and classify. Its proponents tend to approach the study of society in philosophically very different ways and although "joined" in their rejection of scientific positivism, no single inclusive theory is collectively adhered to. Phenomenologists, ethnomethodologists, and symbolic interactionists are among those who share this perspective.

In addition to rejecting scientific positivism, interpretive theorists reject the "black box" perspective of functional and conflict sociologists. They support a microsociological level of analysis and maintain that the strong ideological biases present in functional and conflict formulations lead their proponents to take too much for granted. Shutz, for example, charges that functionalists deal with social reality as if it has a specific and unidimensional meaning. In contrast, Shutz and other phenomenologists conceive of reality as something that people interactively construct together (Boughey 1978, 30).

Harold Garfinkel developed another aspect of the interpretive model by analysing the process whereby individuals negotiate the routines of everyday life. He called this type of analysis ethnomethodology or the study of methods by which people create and sustain consensus about common views of the world and the rules whereby relationships will be continued (Robinson 1981, 16). In this view, social reality is constantly negotiated by the interacting parties.

The value of the ethnomethodological approach to the sociology of education can be seen in the empirical work of Aaron V. Cicourel on Southern California public schools. In this study, the focus is on the test situation itself as a socially constructed phenomenon and the analysis is of interaction between the examiner and the examinee. Nothing is taken for granted - neither the concepts and procedures of the tester nor the linguistic comprehension and performance levels of students tested. Careful classroom observation is employed and its detailed analysis of the testing process seriously challenges the unthinking acceptance of test results as "scientific" (Karabel and Halsey 1977, 55).

Symbolic interactionism is yet another theory that can be classified as part of the interpretive model. Built upon the work of George Herbert Mead and refined by Herbert Blumer, the "interactionist" perspective rests on the premise that the relationship of society and the individual can best be understood in terms of how individuals "define" social situations. Once the situation is formed or defined it tends to remain constant and act back on individuals (Mifflen and Mifflen 1982, 68). The long and impressive tradition of classroom observation studies in the United States generally falls within an interactionist perspective. The interactionist perspective is also concerned with the sociology of knowledge and with how our consciousness (e.g., self-concept) is formed. Particularly important to the development of consciousness is the role of language and communication. The interactionist stresses that subjective meanings are the main subject matter of sociology. As such, society is not treated as a set of real structures distinct from the interpretation of people. People are "creators" of society rather than passive recipients of a society's norms and values (Hagedorn 1980, 13).

The Interpretive Model and the Sociology of Education

Though there are significant philosophical differences among those who adhere to the interpretive model, it is possible to establish commonalities in their approach to the study of education. First, the model represents a break with the assumptions, methods, and theories endorsed by functionalists and neo-Marxists. Its perspective is anti-positivist, ahistorical, and more concerned with understanding than with prediction (Hurn 1976, 105). Second, it emphasizes that the subjective meanings attached by students and teachers to everyday events are the areas of importance for sociologists interested in education. Its proponents point out that functionalists and conflict theorists alike ignore the "black box" of schooling. As a result, curricula, student-teacher interaction, and the concepts employed by teachers in teaching students are taken for granted rather than being treated as problematic areas requiring close attention. M.F.D. Young, a British sociologist, and critically important in terms of the development of the interpretive model, emphasized that educational research should be concerned with the microlevel problems of the "curricular, pedagogic and assessment categories held by school personnel", teacher-student interaction, and above all the curriculum (Karabel and Halsey 1977, 46). Third, the model endorses observation or participant observation as the appropriate research methodology to be employed in examining the subjective meanings attached by individuals engaged in interpersonal relationships within schools (Karabel and Halsey 1977, 57). Rather than evaluating "common sense" hypotheses concerning the relationship between social class and achievement, researchers spend their time observing and analysing teacher behaviour as reflected in speech patterns, seating arrangements among students, and the sorts of communications that take place among students (Selakovich 1984, 17). They wish to study how people in schools classify and label the behaviour of others. Moreover, they believe it important to study the processes by which teachers come to typify students as "bright" and "dull" and to identify the implicit theories teachers employ to explain performance differences among students. Finally (and consistent with the thinking of Ivan Illich) sociologists who support the interpretative model want to examine how certain kinds of knowledge come to be defined as "school" or "expert" knowledge, while outside-of-school knowledge is seen as "common sense" or "irrelevant" knowledge.

The New Sociology of Education in England

An amalgam of anthropological, interactionist, and phenomenological works, the "new" sociology is almost entirely a British creation of the late 1960s and 1970s. Within this movement, the works of M.F.D. Young and Basil Bernstein are particularly important. Both attempt to bridge the gap between macro and microsociological levels in their educational studies. As Young succinctly notes:

> ...it is or should be the central task of the sociology of education to relate the principles of selection and organization that underlay curricula to their institutional and interactional setting in schools and [to relate] classrooms to the wider social structure (Karabel and Halsey 1977, 59).

Young's work (1971) focuses on what counts as knowledge within educational institutions. There is a clear recognition that political conflict and decision are part of this process. Young argues that the accepted definition of what counts as education is a reflection of the social relations of production (Robinson 1981).

Bernstein's earlier work in the 1960s was anchored in a more traditional sociology of education. He sought to evaluate the thesis that social class generates distinct forms of communication (that is, restricted speech codes among the working class and elaborate speech codes among the middle class). Bernstein maintains that the lack of an elaborate speech code among working-class adolescents is intimately related to their lower scholastic success in schools. Why does this occur? Restricted codes, embedded as they are in a local context that encourages particularistic meanings, run counter to the demands of most schools; these schools usually require a set of aptitudes embodied in an elaborated code (Bernstein 1973). Bernstein strongly attacks the theory of cultural deficit (as applied to working-class or minority children) and argues that education cannot compensate for society. Karabel and Halsey (1977, 65) maintain that "Unpalatable as it may be, the logic of Bernstein's sociolinguistic thesis leads inexorably to the conclusion that those whose experience is regulated by a restricted code are, in terms of the demands necessarily placed on them by school, linguistically deprived."

In the early 1970s Bernstein facilitated the emergence of the new sociology when he published "On the Classification and Framing of Educational Knowledge." In this work on the organization of knowledge, Bernstein states that "How a society selects, classifies, distributes, transmits and evaluates the educational knowledge it considers to be public, reflects both the distribution of power and the principles of social control" (1971, 202). Moreover, educational knowledge has a major role to play in structuring our identity; it does this through three message systems of curriculum, pedagogy, and evaluation.

The questions that may be raised in clarifying the transmission of education knowledge are: what counts as valid knowledge, what counts as valid transmission, and what counts as valid evaluation (Robinson 1981, 116). Knowledge, however, occurs in a social context and wider patterns of power and control influence the educational process at every turn. Bernstein employs the concepts of "classification" and "framing" to discover these underlying principles of power and control. Curricula, or what counts as valid knowledge, vary in one very important characteristic, that is, the boundaries around that knowledge. Curriculum with strong boundaries around its subject matter is labelled as a strong classification while the opposite extreme is labelled as a weak classification. In fact, boundary maintenance has definite implications for the status of curriculum. Young (1971) extends this argument when he claims that high status knowledge will reflect principles of exclusion, will be abstract and theoretical, and stress remoteness from everyday concerns. In addition, there will be a tendency to reserve high status knowledge for those defined as the most competent or able.

While the basic principles of curriculum are captured in the classification concept, pedagogy is realized through framing, which Bernstein defines as "the degree of control teacher and pupil possess over the selection, organization, pacing and timing of knowledge transmitted and received in the pedagogical relationship" (1971, 206).

These educational studies by Bernstein (and later works that deal with visible and invisible pedagogies) have received critical scrutiny on both theoretical and empirical grounds. Some claim that Bernstein's treatment of class is not particularly coherent or sufficiently elaborated (Demaine, 1951, 39). Other criticisms are empirical. His research on the development of restricted and elaborated codes is primarily based on experimental or contrived designs; he presents little direct empirical evidence drawn from natural settings (Murphy 1979, 151).

Although there has been controversy surrounding Bernstein's theory and methodology, his contributions and those of Young should be considered outstanding. By emphasizing the interest bound nature of the content of the transmission process, both social scientists work at bridging the gap between macro and microsociology. It is interesting to note in this regard that some would label Bernstein and Young as conflict theorists rather than proponents of the interpretive model.

E. RESEARCH METHODOLOGIES RELATED TO SOCIOLOGICAL MODELS OF EDUCATION: ADVANTAGES AND DISADVANTAGES

Social scientists are generally concerned with descriptive and explanatory inquiry. The former has as its object the understanding and clarification of some phenomena where accurate information is missing. After a thorough description, subsequent investigation is usually explanatory in nature. Propositions are developed, hypotheses derived, and causal links among variables are frequently tested.

The basic distinction between descriptive and explanatory inquiry relates to three general types of research methodology -- the qualitative research format, the survey, and the experiment. In sociology, the use of the experiment is virtually non-existent.

The case study or qualitative research methodology may employ different forms of observational inquiry (e.g., participant or non-participant observation; analysis of secondary sources such as letters). In contrast, the survey format depends on the use of interviews, questionnaires, or some combination of these techniques. Survey approaches may either be cross-sectional or longitudinal in design. Cross-sectional or "one shot" studies provide us with a view of a population at one time only. Unlike contrived experiments, there is a lack of initial equality in the characteristics of groups being compared. Although statistics are employed to approximate an experimental design, the cross-sectional technique is less precise for establishing causality. The longitudinal or panel technique makes "time" a variable and this allows us to compare changes in important variables (e.g., academic performance) for the same persons over some period of time. One result is that establishing causality is less tenuous than when a cross-sectional design is employed.

The major research format that has traditionally been employed by proponents of structural functionalism and the conflict paradigm is that of survey research. The earlier review of Coleman, Jencks, Bowles and Gintis, and the Wisconsin model shows that survey research and the use of sophisticated statistical analysis characterize the research studies of both models. In contrast, the interpretative paradigm adopted observational and phenomenological strategies in forging new directions in the sociology of education. Observational studies of the classroom and case studies of specific schools were strongly emphasized in developing these new directions. In the following section, the methodological advantages and disadvantages of survey research techniques and observational or field research strategies are identified and reviewed.

Observational or Field Research Methods

The main advantage of observational or qualitative research is its directness; behaviour may be studied as it occurs. Researchers can simply watch people say or do things and record these activities for subsequent analysis. These first-hand data are largely uncontaminated by factors standing between the researcher and the object of research. In survey research, people are often asked to recall past experiences. Their memories may be subject to distortions in recall and thus significantly contaminate the analysis of data.

Another advantage of observational research is that it occurs in natural settings. This means that the "artificiality" of interviews and the peculiar problems associated with developing adequate questionnaires are minimized in qualitative studies. Insofar as the observer can remain "invisible", the relationship between a person and his or her environment is best maintained when employing observational methodologies. Michael A. Patton captures some of the advantages of qualitative or observational approach when he states:

> ...one of the purposes of most qualitative work is to construct a holistic picture of the setting to understand it in its wholeness rather than taking it apart and dichotomizing, breaking it up into pieces or variables, independent or dependent.... This setting is construed as a whole, and one attempts to understand that wholeness which is part of the context boundaries of qualitative approaches. It is an effort to understand situations in their uniqueness as part of a particular context and interaction, where this understanding is an end in itself, so that it is not attempting to predict what may happen in the future necessarily, but to understand the nature of that setting--what it means for participants to be in that setting, what their lives are like, what's going on for them, what their view is, what their meanings are, what the world looks like in that particular setting--and in the analysis to be able to communicate that faithfully to others interested in that setting (1985, 1).

While qualitative research methodologies provide effective tools for studying subtle nuances of attitudes and behaviours, are far more flexible than surveys in terms of design and implementation, and can be relatively less expensive than surveys, they do have a number of weaknesses.

First, observational research methodologies seldom yield precise descriptive statements about a large population. Usually a "case study" approach is employed (e.g., describing one school), and although important insights result from such studies they cannot easily be generalized to a larger population.

A second major weakness of qualitative field research is summarized by Babbie:

> More generally, the conclusions drawn from qualitative field research are often regarded as suggestive rather than definitive. In part that is a function of the informal sampling and uncertain representativeness of the observations made and recorded. Also involved is the nature of operational definition and measurement in field research. Since field research depends so heavily on the judgments and total comprehension of the researcher, operating within the context of the phenomenon under study, field research involves the uniform application of precise operational definitions (1979, 227-228).

The chief disadvantages of qualitative or field research methodology are in relation to the scientific norms of generalizability and reliability. Although descriptive statements generated by case studies may be generally applicable, and different field researchers may arrive at similar research conclusions, we simply have less assurance than in the instance where survey techniques are employed.

Survey Research Methodologies

Survey research techniques are particularly useful in describing the characteristics of a large population. By employing a carefully designed probability sample in combination with a standardized and pre-tested questionnaire we may make refined descriptive assertions about urban and rural schools, different student bodies, and so on. When sample sizes in surveys are sufficiently large, explanatory analyses of a sophisticated nature can be conducted. Several variables can be analysed simultaneously and generalizations regarding school effects or outcomes can be produced.

The use of standardized questionnaires avoids one of the problems encountered by qualitative researchers, that is, the problem of reliability. Nonetheless, survey researchers must assume that respondents interpret identical questions in a similar manner.

As the earlier quote by Patton demonstrates, qualitative researchers reject a "variable" approach in studying aspects of education and schooling. They argue that such studies typically employ crude measures, resulting in analyses that are frequently insensitive to the nuances of school life and the context in which schooling occurs. Only research grounded in detailed field observation can yield more insightful and subtle data. Questionnaires are seen as arranging life in an artificial manner; people do not ordinarily respond in an "agree strongly, disagree strongly" format. Although Hurn believes that the results of large-scale survey research are valid, given the measures employed, he does agree with many of the criticisms of qualitative researchers. Hurn states:

> ...there is no doubt that the measures used in much of this research are extremely crude. Variations on per capita expenditures on schools and in pupil-teacher ratios may tell us little about such matters as school morale or the educational quality of day-to-day interaction in schools. Analogously, group administered achievement tests of verbal and

> numerical skills are inferior substitutes for careful individual assessment of student progress in a variety of areas. Such tests may also systematically discriminate against lower-class and minority students. In sum, this criticism maintains such research tells us little because its measures are too crude to do justice to the complexity of learning in schools (1985, 148).

In addition to the weaknesses noted above there are several other specific methodological problems associated with employing survey research methodologies in evaluating school outcomes or effects. These include the problems of disaggregation, multicollinearity, time, and the dependent variable(s) used to characterize school outcomes.

As Lanphier (1983) explains, it is frequently difficult to assess the exact impact of school on student outcomes.

> Despite the ubiquity of formal educational experience among all youths, it is notoriously difficult to disaggregate effects of educational experiences or the impact of education as a social institution from other effects which bear simultaneously upon the lifestyle and behaviour of youth. Primarily among the effects which are confounded are effects of the family context and peer pressure.... At best, then, effects on youth culture which are attributed to schooling are probably a joint effect of the educational programme and family/class origin. Nonetheless, such effects are remarkable for their identifiability and pervasiveness, despite the ambiguity which attends the results (14-15).

Another methodological issue concerns the problem of multicollinearity or the lack of independence between learner's characteristics and school environment factors (Boocock 1980, 206); that is, "better" or more effective schools, defined in student outcome terms, tend to be located in higher income neighbourhoods, attended by children from higher status families, and staffed by higher "quality" teachers. This lack of independence between background and school variables tends to create a statistical bias against attributing student outcome differences to school resources.

A third problem is connected with the time factor. McPartland et al. (1976) point out that most social science research has focused on immediate rather than long-term life consequences of schooling. The latter is exceedingly difficult to measure given the number of factors that intervene between initial schooling and later life experience. McPartland and his colleagues speculate that even if short-term effects are small, it is possible that:

> ...a sizeable impact of school differences would become evident if certain contrasts continued over many years. [Moreover], a reasonable explanation for why family or neighbourhood effects are small is that a student is exposed to a consistent environment for the first variables but not the second. The inconsistency of the school environment becomes obvious when we observe that the average student may have an exceptional teacher one year and poor one the next (1976, 5-6).

There has been increasing concern during the last decade and mounting criticism by adherents of the new sociology that the dependent variables used to measure school outcomes are crude and too narrowly defined. Viewing school effectiveness in terms of cognitive outcomes (e.g., academic performance) ignores a whole host of other, important school outcomes (e.g., how students feel and act towards their environment). Another related issue involves the use of multiple indicators of the same dependent variable. Many studies only employ one measurement and are therefore open to the validity criticism; that is, the measure may not really measure the relevant concept. Anderson (1982) suggests, for instance, that "various ways of measuring a given outcome should be compared to see which is most responsive to school climate".

The issue of what appropriate research strategies should be employed in measuring educational outcomes will be raised in the concluding chapter. Given the separate contributions made by quantitative and qualitative methodologies, their complementary use in researching outcomes seems clearly indicated.

CHAPTER FIVE

MAJOR STUDENT OUTCOMES

Much has been written about the crises in education in recent decades. Reaction to these crises typically takes the form of a series of debates about causes and solutions. Since there are competing philosophies of education, varying outcomes that fall within the mandate of contemporary education, and different theoretical perspectives on the role of education for society and the individual, such debates are not surprising. In this chapter, the substance of three of these debates is detailed. The aim is to further an understanding of the relationship between models and outcomes of education.

Before proceeding, it is useful to restate what is meant by crisis. For education to be in crisis, there is a failure of schooling to meet its responsibilities, with serious implications for the individual and for society as a result. As Husen comments, "The term 'crisis' would seem more appropriate in characterizing the relationship between school and society than in describing the problems within the school" (1979, 19). This is in large part because schools as institutions have come to take on societal goals in addition to traditional and continuing commitments to the formal education of the young and their realization as responsible, fulfilled adults. Schools ought to provide equality of opportunity to all of society's segments whether ethnocultural groups, different social classes, men, women, the especially gifted, or the disabled. It is the perceived failure of the schools to accomplish this social goal, coupled with concerns that equality and excellence seem to be in unavoidable conflict, that both define and animate the debate over contemporary crises in education.

Obviously, the inadequacies of the educational system have differed depending on the varying goals and expectations of educators and of the public at different times. The pendulum swings between traditionalist and progressivist philosophies of education outlined in chapter 2 provide one example. This continuing debate over philosophy of education goals is analogous to, and part of, the cyclical nature of educational change and crisis. As Boocock comments (1980, 317):

> Educational change, like educational structure, reflects the time and place in which it occurs (or is proposed).... There is a cyclical...quality about the major changes in educational systems - for example the shifts between demands for centralization and decentralization...between demands for more attention to childrens' socioemotional development and more attention to the basics; between assignment of the major responsibility for learning to teachers or schools....

Just as the perception of crisis changes over time, so too do the postulated causes of the inadequacies. Different attributes have been stressed at different times and for different reasons. The adequacy of teachers, their training programs, the organizational structure, financial resources, and climate of the schools as institutions, the relevance of the curriculum, the significance of the "hidden curriculum", the student's individual ambition, motivation, and innate ability are but some of the variables that have been scrutinized.

We become aware of the inadequacies of the educational system by observation of the outcomes of schooling that do not square with our expectations. Because the North American paradigm concerning what education is or ought to be and what education produces (outcomes) is complex and, to some extent, internally contradictory, a number of inadequacies have been identified. Nicholas characterizes the American educational tradition as "liberal pragmatism" (1983, 7); its elements also largely apply to the Canadian situation. These include: decentralized control of education with federal agencies having limited powers; stress on the school's role of socializing children of immigrants into the dominant culture; design of schools and their curricula to assist the individual in his or her pursuit of freedom and social mobility; and knowing "how" being more serious than knowing "that" (in contrast to the European classical tradition of knowledge for its own sake).

Thus, for example, when high school graduates cannot find jobs or when functional illiteracy in English increases among the young, or the working-class/immigrant/Native child receives a different schooling than the middle-class/third-plus generation/white child, the educational system comes under attack.

In the sections to follow we examine three crises in education more closely: academic achievement, multiculturalism in education, and the school to work transition. There are several reasons for the selection of these three particular topics. First, each has been defined in crisis terms at various times over the last twenty years. A concern with academic achievement is an enduring school goal while transition to work is a relatively recent concern. Multiculturalism is part of the concern over equality of opportunity and condition and has been since the 1960s. The debates surrounding these crises highlight the different theoretical models of education.

Each topic is an example of a different educational outcome. Academic achievement is, of course, a psychological cognitive outcome; it is also a comparatively short-term outcome. Multiculturalism and occupational placement are longer term outcomes of education. Transition to work is concerned with a behavioural outcome, more specifically with a cognitive behavioural outcome. Multiculturalism is an affective outcome, primarily psychological as such things as self-esteem and self-respect are involved. These examples from three of the four cells in our outcome typology are thus useful in linking models with outcomes.

A final reason for choosing these particular three crises is their current relevance to educational policy in Ontario. Of the thirteen OSIS goals of education, three are devoted to cognitive development or academic achievement. Preparation for the work world is also a specific goal as is multiculturalism.

The explication of each crisis will include a brief sketch of the historical context, the major issues and problems to be solved, and the various sides of the debate. The various problems are complex and need definition before any attempt at generalization of the model/outcome relationship can be undertaken.

A. MULTICULTURALISM IN EDUCATION

As already mentioned, the concept of equal educational opportunity has been central in the ideology of North American schooling especially because schooling is viewed as such a primary mechanism for economic attainment. As Ching et al. point out, until very recently equality has been viewed only in the context of Anglo-American or Anglo-Canadian culture. Acquisition of the majority culture has traditionally been seen as a necessary means of gaining access to economic and political power (1981, 140).

The classical model of immigrant assimilation (Park and Burgess 1921) assumed that, while the majority of immigrants would enter the economic system at its lowest levels, they and their children, through education, would gradually move up the social scale. Ethnic differences would eventually disappear as immigrants and their children shifted towards the characteristics of the third-plus generation who were largely of British or Western ancestry. In Canada, Porter's work (1965) modified this perspective by highlighting the persistence of ethnicity as a basis for social stratification. Because the British Charter group had established such a powerful position in Canadian society, British immigrants shared many of the privileges and advantages of the Canadian-born British. The entry status of other ethnic groups would be less advantageous and would be perpetuated beyond the immigrant generation. Thus, Porter assumed that not being British would be a permanent handicap.

The most recent North American evidence (from the census of the 1970s and 1980s) tends to support Porter's interpretation in most but not all respects. In the U.S., blacks, Hispanics, and women have higher rates of unemployment and underemployment and less remunerative jobs than majority males. In 1980, a third of all black and Hispanic males were underemployed (i.e., had higher levels of formal education than required for the jobs) compared to one-quarter of majority males; the returns to education were much less for the minorities; there were large differences in unemployment between groups at the same educational level; and minorities continued to have lower levels of educational attainment with a disproportionately greater number involved in vocational training associated with low status, poorly paid jobs (1982 U.S. Commission on Civil Rights).

In Canada, the educational and socio-economic disadvantages of Native Canadians are still severe (Richmond and Rhyne 1981). Immigrants from the UK or the US have high levels of education and other skills and achieve high status. Although other immigrants are also selected on the basis of education and skills, they earn less than expected given their education. The status of the second generation (Canadian born of foreign-born parents), however, does not support Porter's assumptions of the non-British handicap. Although there is some ethnic variation, the second generation achieved levels of education and income above expectation and usually above that of their counterparts in the third-plus generation (Goldlust and Richmond 1974; Richmond and Kalbach 1980; Rhyne 1981; Hertzberg 1981; Chiswick 1977; Richmond and Verma 1978; Therman and Hausen 1978; Mau 1981). There is also evidence that the upward occupational mobility and status of the children of immigrants is superior to that of the third-plus generation although there seems to be a convergence over time (Boyd, Goyder, et al. 1981; Lanphier 1980; Kalbach et al. 1984).

The persistence of disadvantage has been an important factor in the debate over multiculturalism in the schools. There are several reasons for this. First, in historical context, ethnic pluralism is the most recent solution aimed at providing equal educational opportunity and there are still advocates of assimilationist and separatist policies. Second, the translation of an official multiculturalism policy into the day to day actualities of curriculum, teacher training, and assessment methods can and has taken several forms, each with advantages and limitations. Third, the outcomes of multicultural education appear to be unclear even though the benefits are potentially great.

There are three major ways ethnic groups can be treated by society and the educational system. Ethnic groups can be expected to assimilate into the majority culture. For schools, this implies curricular stress on the history, values, and culture of the host society and English as the language of instruction. Until very recently, this was the major treatment of ethnic group education in North America. A second treatment is to segregate the minority group giving them "separate but equal" educational opportunities and facilities. The treatment of blacks in the United States prior to 1951 and the situation of Native Canadians even today are examples of especially inequitable treatment while separate ethnic or religious schools are more benign. A third treatment is ethnic pluralism exemplified by Canada's policy of multiculturalism. Clairmont and Wren characterize multiculturalism as a multiplicity of subgroups with their own cultural, racial, or historical identity coexisting in mutual tolerance in a liberal democratic state (1980, 312).

One important aspect of the multiculturalism debate has been the dialogue between assimilationists and pluralists. As Wyatt (1984) makes clear, both groups are trying to ensure equality of opportunity of ethnic and other minority groups. Since assimilationists feel that social equality is gained by having all children receive the same educational programs, they favour schooling that minimizes differences. "Programs which teach English as a second language are sufficient for achieving linguistic goals; any support for programming which encourages diversity should come from and be conducted within the ethnic community" (Wyatt 1984, 99). In contrast, pluralists feel that proper educational programs can provide for cohesion of the society at large and ethnic group desires.

The Historical Context of Multiculturalism in Education

Many writers (Hurn 1985; Husen 1979; Banks 1981) place the beginnings of the North American multiculturalism debate in the 1960s. (Of course in Canada, this issue has a far longer history, particularly with respect to language of instruction.) Banks sees the popularity of cultural pluralism in the 1960s as a response to the ethnic revitalization movement of that period, which was in turn a response to inequality and institutionalized discrimination (1981, 18). Ching et al. (1981) link ethnic pluralism with the failure of previous reform efforts to provide equality of education for minority children.

These previous reform efforts had been undertaken with assimilationist goals in mind and included compensatory educational programs, the provision for the language needs of immigrant children, and attempts to disperse students from inner-city areas to suburban schools (Ching et al. 1981; Verma 1982). Beginning in the 1970s, there was a shift to ideas of cultural difference rather than cultural deficit. Researchers began examining the characteristics of the school experience as objects for reform. Monocultural curriculum content, ethnic stereotyping in texts, culturally biased testing and grouping practices, and the expectations of educators for minority children began to be systematically examined.

In Canada, the adoption of the Official Languages Act (1969) and large increases in immigration over the past fifteen years had an especially important impact on emergent provincial policies of multiculturalism in education. The general result was a broadening of educational approaches for students from different linguistic and cultural backgrounds (Shapson and D'Oyley 1984). Responses to the needs of minority language students have included the provision for special instruction in the majority language, the introduction of multicultural issues into the general curriculum, and some minority language instruction.

Now in place is a full fledged cultural pluralism model. OSIS specifies as one of its goals of education the need to "develop esteem for the customs, cultures and beliefs of a wide variety of societal groups". Banks describes this multi-ethnic ideology in another way by defining the major goal of school reform as the development of cross-cultural competency. This involves skills, attitudes, and abilities that allow a person to function in his or her own ethnic subsociety and the universal culture, as well as within and across other cultures.

Multiculturalism and the Curriculum

Curriculum change is generally seen as the most important aspect of multicultural educational reform. Indeed, Bullivant (1981) sees the entire pluralist dilemma in education as a matter of the conflict behind the degree of diversity to allow in curriculum planning and the degree of centralized control required to have a minimal common core.

Williams (1979) has identified three perspectives of the multicultural curriculum that are informative here. First, is the technicist perspective, which assumes that problems related to skills can be dealt with by teaching experts. This perspective is clearly part of the compensatory education idea and, as such, subject to its limitations. There is also a moral perspective. The multicultural curriculum attempts to improve self-understanding, to foster co-operation, and to diminish prejudice. Here is a clear relation to affective outcomes of schooling. Finally there is a socio-political perspective, which assumes the changed curriculum will mean that internal colonial cultural domination will cease.

Each perspective can be seen in the educational responses to minority students described by Cummins (1984). The various English as a second language (ESL) programs are perhaps the clearest example of the technicist perspective. ESL teachers provide special instruction in the majority language and help students understand the new culture. However, it remains to be seen whether total integration, a withdrawal class, or a receptor classes is the most appropriate way to offer this special instruction.

ESL is not the only type of language instruction associated with multiculturalism. There is also the offering of minority languages in the school. Cummins (1984) indicates that these can follow either a transitional or enrichment model. In the transitional model, the mother tongue is used as a temporary bridge to facilitate subsequent fluency in English. This is also a technicist approach. However, enrichment models, such as Ontario's Heritage Language Programs, use the mother tongue as a way to transmit culture, to foster self-esteem, ethnic identity, and pride. Hence, this type of language instruction, which is concerned with affective outcomes of schooling, falls within the moral perspective.

Multiculturalism as part of the general curriculum can be seen from both moral and socio-political perspectives. The presence of units dealing with ethnic histories, customs and values, and multifaceted attacks on racism are clearly moral in intent. To the extent that ethnic pluralism is treated as a comprehensive part of life involving more than a tourist or museum approach to understanding others, it does reduce cultural domination and prejudice (Cummins 1984; Kehoe and Echols 1984; Buchignani 1982).

Bullivant's is perhaps the best treatment of the socio-political perspective. Although he dealt with more than the curriculum in The Pluralist Dilemma (1981), he concludes his six national case studies by observing that multicultural education maintains an ethnic group's life style but probably does not improve its life chances.

This distinction between life style and life chances suggests a number of contradictions. There seems to be a persistence of occupational and economic disadvantage among selected ethnic and racial groups despite increased educational attainment and despite increased pride in heritage. It may be that certain cognitive and affective outcomes of education are incompatible. Similarly, the 1980s stress on excellence in educational basics, cultural pluralism, and equality of opportunity may contain inherent contradictions that act to disadvantage the already disadvantaged.

Outcomes of Multicultural Education

The aims of multicultural education are twofold: to realize the potential of culturally and linguistically diverse children and to promote social cohesion through a universal appreciation and acceptance of the ethnic mosaic. The extent to which these goals have been achieved remains unclear. Both methodological problems with existing research and the complexity of multiculturalism itself have clouded the issue.

Verma's review of research on multicultural education points to a number of problems (1982). "The main theme in most of the writings is that curriculum change will increase interethnic understanding and hence acceptance of cultural diversity. Such assumptions have not been tested empirically." Lack of clarity as to definition and aims, terminological problems, cultural bias inherent in tests of tolerance, and the difficulties of actually identifying the values and aspirations of ethnic and linguistic groups have limited the utility of studies on multicultural education. Despite these drawbacks recent research (see Chalmers 1984; Brown 1983; Luke 1983) continues to assume that "a changed curriculum has become synonymous with multicultural education" (Verma 1982).

Banks (1984) summarizes research on how to reduce prejudice in schools. Microlevel research indicates that materials, films, inter-racial contact, and special units on minority groups can modify childrens' attitudes. More important, however, are findings that schools can unwittingly perpetuate prejudice in subtle yet powerful ways. Banks itemizes the following: the kind of verbal and non-verbal interactions teachers have with students from different racial and ethnic backgrounds; the kinds of statements teachers make about different groups; teacher reaction to ethnic group unit discussions in class; teacher response to different languages and dialects; observation of power relationships within the school (i.e., what ethnic groups are present among teachers, staff, administrators, etc.); grouping practices (i.e., placement in ability groups based on biased aptitude tests); and learning style preferred by teacher. Thus while changes in the formal curriculum can help promote mutual tolerance, on balance the "hidden curriculum" is the more critical and the more difficult to reform.

Findings concerning language immersion and minority language instruction in Canada are summarized by Cummins (1984) and Genesse (1984). In general, the research suggests that bilingualismis not necessary for high-level performance for all minorities but that it does seem to enhance cognitive functioning. The ability of minority language students to succeed in English only classes seems related more to degree of ambivalence about home and minority cultures than to socio-economic status. This contrasts with earlier research on bilingualism for non-official language speakers.

In sum, multicultural education, if properly designed, does seem to promote affective outcomes such as self-esteem or tolerance and to be perfectly compatible with psychological cognitive outcomes such as mental functioning and academic achievement. The critical issue is the extent to which multicultural education assists in longer term outcomes such as occupational success and prestige.

Moodley is particularly critical of what he sees as the neglect of long-term outcomes in multicultural education, but he treats it as one of the consequences of the complexity of multiculturalism itself (1985, 15):

> Much of the ambiguity surrounding the policy of multiculturalism also applies to multicultural education. It incorporates notions of cultural pluralism, special needs and, more recently, anti-racism as a change of attitudes. Underlying these, a sense of cultural harmony is pervasive but overlooks the prime goals of equality of opportunity and equality of condition.

Moodley's statement succinctly describes several aspects of the complexity surrounding multiculturalism in education. As already described, cultural pluralism can be conceptualized on a continuum ranging from tolerance to true cross-cultural competency, and the translation of these concepts into the actualities of school programs is not a simple matter. Also previously described is the disjunction between improved life chances and multicultural education and the various ways in which educators have attempted to meet the needs of cultural minorities.

The notion of special needs points to an additional complexity for multiculturalism in education. Ontario's ethnic population is by no means unidimensional and the special needs of one group are not necessarily those of another. Native Canadians, "established" ethnic groups with second, third, and third-plus generations, new immigrants, and visible minorities each have quite different language needs and educational priorities.

To conclude, it seems that multiculturalism as an outcome of education has been achieved with varying degrees of success. The overall educational attainments of ethnocultural groups have improved but serious educational disadvantage remains characteristic of certain groups, particularly Native Canadians. Awareness and acceptance of different cultures is growing but prejudice directed at visible minority groups remains a problem. It is appropriate to restate what has already been said. The really crucial aspect of multicultural education is its role as a causal agent - its ability to influence longer term outcomes of education.

B. THE TRANSITION TO WORK

The transition from school to work has always been of interest to those concerned with outcomes of education. The passage from the student role to that of wage earner is one of the major areas for the investigation of behavioural rather than cognitive outcomes. The impact of socio-demographic characteristics such as class, gender, educational attainment or ethnicity on both occupational aspirations and placement has been a traditional area of research in this respect. Other work has examined the effect of institutional processes such as classroom interaction patterns, peer group culture, or family effects on occupational status.

In the current era, with its escalating unemployment, the concern over youth in the labour force has become particularly acute. Employment and Immigration Canada (1984) indicates that although youth make up around 22 per cent of the 1983 labour force, they also constitute 40 per cent of the unemployed and 32 per cent of those without work for twelve months. While early school leavers experience the most pervasive barriers to occupational attainment with university graduates having much better job prospects, the current debate goes far beyond the problems of high school dropouts. As Lanphier and Perez comment: "Never before have we witnessed such an unequivocal call for a connectedness between education and employment opportunities" (1984, 9). Much of the call for reform centres on changes to the curriculum.

Thus, two currents feed the present dilemma surrounding the school/work relationship. On the one hand, there is concern over the role of education in shaping the kind of careers and status former students are likely to obtain. Second, there is concern over what kind of schooling to provide so as to best prepare students for the work world. While the two are obviously related, they can be discussed separately for analytical purposes.

Socio-Demographic Factors in the Work-School Transition

In a review of the literature on youth employment, Hartnagel et al. comment that it is unclear how such basic socio-demographic factors as class, sex, or ethnicity "forge enduring patterns during the work-school transition which determine future life chances" (1985, 4). At the same time research does show strong associations between socio-demographic characteristics and the work world.

Some of these relationships have already been discussed in the section on multiculturalism. By and large, the Canadian data on the impact of ethnicity on the labour market does not focus on youth. Also, after controls for education and age, the effects are not always clear cut. Kalbach and Richmond's analysis (1980) of 1971 census data indicates the following: age and education explain a much greater proportion of variation in occupational distributions in all provinces except in Quebec, where factors associated with ethnicity appeared to be more influential, and, for those of European or Jewish origin, ethnicity seemed more important than for other groups.

Research on gender difference in the transition to work is more clear cut. The segregation of the labour market into male and female jobs is reinforced by gender differences in early socialization. Male and female students also differ significantly in educational and occupational ambition and achievement (Anisef et al. 1980; Porter et al. 1982; Cowan 1985).

Class differences in occupational placement have also been widely investigated. The associations of the working class with blue-collar jobs, and the middle class with white-collar jobs and with greater intergenerational upward occupational mobility, have become entrenched in the research literature. Here, two competing theoretical perspectives offer different reasons. Status attainment theory sees student occupational ambition and ability as the most important predictors of later occupational status. School, family, and peers all help shape these aspirations for Ontario students according to Porter and his colleagues (1982, 104). In contrast, cultural reproduction of class theories as proposed by Bourdieu (1977), Willis (1977), or Jenkins (1983) explain working-class occupational structures by reference to the formation of a working-class youth culture that rejects middle-class credentialism. Hartnagel et al. (1985) critique both types of research as limited to one or the other segment of youth and inadequate to the full class range of students.

At the same time, both perspectives identify school as one of the critical institutions in the creation of youth culture, life style, attitudes, and aspirations; both see these affective outcomes as shaping occupational choice. Hurn (1985) reviews much of the research examining such school processes and concludes that at the secondary school level, education does seem to be more or less meritocratic. However, at the elementary level certain factors are at work that tend to reproduce the relative advantage and/or disadvantage of different classes, sexes, and ethnic groups.

In contrast to Hurn's description of secondary education as meritocratic, Oakes' (1982) test of the Bowles and Gintis hypothesis offers a different conclusion. Using discriminant analysis of variables measuring classroom relationships and student attitudes in 139 secondary classrooms at different track levels, Oakes found that (1982, 197):

> ...track levels, reflective of racial and social divisions of society are characterized by differences on both dimensions.... That schools appear to play a dynamic role in the reinforcement or production of attitude differences is supported by the finding that track levels are more widely separated and distinct...in senior than in junior high schools.

The Relevance of School for the Work World

The ability of schools to prepare students for the work world has been challenged relatively recently. As previously mentioned, the general attitude for quite a long time was to take for granted that occupational opportunities increased directly with educational achievement. Now with more and more graduates at both the secondary and postsecondary level unable to find work, with the phenomenon of mass unemployment co-existing with a scarcity of skilled labour, and with complaints from employers about the inadequacies of graduates to do the work required, there has been increasing debate over how to make the transition from school to work an easier and even guaranteed one.

As expected, there are several aspects in the present call for reform including educational standards, skills training programs, curriculum change, vocationalization, credentialism and competition, and the professionalization of universities. Each of these will be reviewed in turn. First, however, it will be informative to look at how the work-school relationship has been handled over the past ten to fifteen years.

Educational reforms in Canada since the late 1960s have included the provision of alternative educational programs, elimination or reduction of requirements especially in core subjects, and specific grading systems. Applied business technology and computer technology have been introduced into the curriculum. Students, however, have still been under a dual ranking system, first by "streams" of programs and second by grading systems determining eligibility to higher education (Lanphier and Perez 1983). Thus, educational reform in the 1970s was aimed both at making education more individually oriented, flexible, and relevant and, at making it specifically more relevant for the work world.

Specific technical-educational schedules and programs were also introduced. In Ontario, this was seen as an implementation of the Robarts Plan stressing direct training for employment. Several studies have indicated that this response was not successful. Hall and Carson's 1977 community study of a Southern Ontario town disclosed a large work/school gap. A series of studies by the Ontario Secondary School Teachers' Federation in the late 1970s had much the same conclusions. Job opportunities required few of the skills offered by the programs and students had poor work habits and poor skills. In other words, "vocationalization" of the high schools and community colleges was not very successful in placing graduates in jobs. Hall and Carleton concluded (1977, 277):

> In view of the vast gap between the efforts of the secondary schools to provide technical and academic skills and their meager application in the work world, it can be concluded that much of the effort of the schools to be technically useful is both ill placed and costly.

It is interesting that Hurn sees the trend toward career and professional education in colleges and universities as analogous to the vocationalization of high schools, especially because the professionalization of higher education has been very successful particularly in the United States. Universities still educate in traditional Arts and Sciences, but more and more train students in highly specialized fields and prepare them for a variety of new occupations created by the knowledge revolution (Hurn 1985). The implication seems to be that processes such as channelling, streaming, or curriculum differences tend to facilitate the school-work transition for some and to create real barriers to the job market for others. Hence, another call for reform is to standardize the curriculum for all. The Paideia Proposal in the U.S. (Adler 1982) is one of the major examples of this type of reform. The "back to basics" movement offers another potential solution. Excellence in high school is required for higher education. The university graduate will find work in the primary labour market where youth without advanced education tend to be trapped in the secondary labour market of casual, unskilled, and intermittent work (Osterman 1980; Mason 1984).

An important counter-argument to this position is held by those investigating the impact of increasing "credentialism" on the school-work relationship. Husen (1979) summarizes this position quite clearly. There is a preoccupation with marks, examinations, and diplomas to the point where curricular content is secondary to gaining a degree. This not only degrades the educational system but also creates a neglect of specific competencies needed in the occupational domain for which a particular course is supposed to prepare the student. For Husen, the institutional mismatch between school and work is not the failure of schools to provide saleable skills but the absence of any real work orientation in the educational system. A number of studies, mostly in the U.S., have documented this failure to provide suitable attitudes, values, and self-concept with respect to work (Coleman 1974; Silberman 1970; Martin 1974). Johnson's study of youth unemployment in Toronto (1981) found that youth themselves cite insufficient individual motivation as a cause of unemployment and are also concerned with the lack of connection between school and work.

Lanphier and Perez sum up the two proposals for filling the school-work gap, which "seem to be most clearly articulated in Canada" (1983, 18). First is the school without walls approach as outlined by Lazure (1979). Both curriculum and teaching style would change radically. Subject matter would be based on workplace examples. Instructional methods and student-teacher interaction would be modelled on the traditional master-apprentice system. Both teacher and student would be directly involved in workplace situations. The second approach is exemplified by Proulx (1977). The best preparation for the work world is an increase in the "rigour with which the traditional curriculum is pursued" (Lanphier and Perez 1983, 11). Students would gain experience in the workplace by dividing the time during the week between workplace and classroom. The dual track arrangement of education and employment would continue well beyond the secondary school years with education perceived as a continuous process.

Lanphier and Perez comment that "evidence is lacking in the literature as to whether students have reacted to such proposals with any degree of articulation" (1983, 28). However, the growing success of university work-school co-operative programs (such as the one at the University of Waterloo) seems to favour the latter approach. The Ontario Teachers' Federation review of co-operative programs (1985), however, seems to show they are not especially useful for the majority of students.

As already stated, the literature on credentialism suggests that, in today's society, what is taught is less important than formal certification of having been instructed at a particular level of achievement. The work of a number of scholars has documented the fact that the work skills or credentials demanded by employers are not actually needed for adequate performance of the job (Berg 1970; O'Toole 1974; Collins 1979; Thurston 1977). One explanation advanced for this is a structural one having to do with the maintenance of economic power and privilege. Thus, the transition of work can be viewed as a societal problem, not one specific to education.

The debate continues. Is the transition to work best facilitated by providing students with a set of general "employability" skills and attitudes, by specific courses and training demanded in the workplace, or by structural changes in the labour market and economic system? It is agreed that there is a work-school gap. How to fill that gap is still an issue. One part of a solution might be a research strategy that overcomes the limitations of existing research.

Methodological Considerations in the Work-School Transition

There is abundant evidence that education is an important factor for occupational placement and occupational status. Generally, there is a strong positive relationship between years of schooling or highest level of education and various occupational scales. This association tends to persist regardless of what was studied. However, technical or vocational training is generally associated with lower status and lower paying jobs. Gender, class, age, ethnicity, parents' occupation/education, and other socio-demographic characteristics are implicated in this relationship to varying extents.

Such findings have generally come from data collected in large-scale cross-sectional surveys. Observational studies have supplemented these results by providing insights into how classroom processes make class or gender such formative factors. Neither research strategy touches on the temporal aspects of the work-school relationship. The very word transition implies change over time and cross-sectional studies are simply not equipped to document such shifts. Beyond some early promising work by Rappaport and Rappaport (1968), there has been little qualitative study of the transition process that has proved generalizable. Although Hartnagel et al. (1985) propose a panel survey, following students over the course of their schooling, graduation, and entry into the labour force, as a method to overcome such limitations, such surveys have not yet been carried out in Canada.

Another methodological consideration is the neglect of important variables in various models of the school to work transition. Researchers concerned with labour force patterns tend to use single measures of education while researchers in the area of education tend to neglect structural aspects of the economy and occupational distribution. Mason (1985) sketches a model incorporating both types of variables as well as those relating to family and individual. If used, this model might also improve our knowledge of the transition to work.

C. ACADEMIC ACHIEVEMENT

Academic achievement is an especially important aspect of the current "crisis" in education. In Hurn's view, it constitutes the main cause for concern in the 1980s:

> Schools are attacked for encouraging educational mediocrity rather than excellence. The relevant courses of the seventies have become the frill course of the eighties: elective courses that were designed to meet the students' individual needs are now seen as interfering with concentration on basic subjects; open admissions and liberal promotion practices that were advocated as ways of maximizing educational opportunities are now decried as symbols of the abandonment of academic standards.... Educators no longer insist students learn the basic subjects, nor do they hold students' responsible for even a modicum of effort and self-discipline (Hurn 1985, 2).

As Hurn also points out, although a particular set of problems dominates public discussion, not everyone accepts the definitions of what is wrong (1985, 2). In other words, despite that movement's current popularity, some disagree with the need to get back to basics. As already discussed in the chapter on the history of education in Ontario, confidence in the schools' capacity to produce academic excellence tends to wax and wane over time. However, when there seems to be evidence of lowering achievement, the reaction is understandably strong. There is a persistent long-term concern with educational attainment. At the theoretical level, this is tied to the functionalist's concern with meritocracy. In societal terms, the implications of poor academic achievement are wide ranging especially because of the link between education and getting ahead in the world. For the educational system, poor academic achievement implicates student ability, teacher performance, and, most critically, school effectiveness.

There is, of course, a massive literature on cognitive outcomes of education. In the discussion to follow, we will examine these findings with respect to four topics: variations in academic achievement; determinants of academic achievement; the school as source of unequal achievement; and the measurement of academic achievement. Data on variations in cognitive development provide insight into the current debate on academic excellence. The discussion of determinants shows how the different theoretical models treat achievement. The review of school effectiveness research provides a historical context for the current debate as well as a summary of findings. The section on measurement relates academic achievement to the typology of outcomes discussed earlier in this report.

Variations in Academic Achievement

Three types of variation in academic achievement are group differences (i.e., by sex, ethnicity, race, class), individual differences, and overall differences through time. It is the overall differences that are probably at the heart of the current back to basics movement. A great deal of evidence suggests that academic achievement in secondary schools in the 1980s is lower than it was in the 1960s (Hurn 1985, 300; Garbarino and Asp 1981). Nationwide declines in scholastic aptitude test (SAT) scores have been particularly publicized. The literary incompetence of students entering university has been made much of as have employer's complaints of poor reading and writing skills. Since these trends in achievement have occurred during a time when schools had been oriented to a more progressive, individualistic, unregimented model, many have been tempted to assume a causal connection.

Individual differences in academic achievement have led in two research directions. One body of research grounded in the nature/nurture controversy, has examined IQ tests. The evidence is contradictory but tends to support the proposition that individual differences on IQ tests are strongly shaped by inherited or genetic factors (Hurn 1985). The other research direction has focused on environmental and socio-psychological components of academic performance, also with mixed success. The importance of high aspirations and motivation in student learning, as well as the pedagogic techniques (and other factors) promoting these attitudes, are the major topics here.

Social class, ethnic, and gender differences in achievement have been widely studied in the last twenty years. Some of this material has already been reviewed. To summarize, the academic attainments of lower-class, minority, or female students are lower than those of middle-class, majority, or male students. More specifically, those from families with low socio-economic status and those from the working class tend to have lower academic achievement than those from higher socio-economic status backgrounds and those from the professional-managerial or business classes. Visible minority group students are less likely than others to be good students regardless of the values attached to achievement or education. Students from other more established ethnic groups tend to out-perform their parents' generation and often exceed the third-plus generation in educational attainments. There is, however, continued educational disadvantage for most immigrant and Native Canadian groups. While girls generally show an academic advantage at the elementary level and into high school, boys tend to overtake girls in late adolescence. This trend may be changing as more and more women enter university. Males and females have tended to have different areas of academic expertise. Boys perform better in mathematics and science while girls excel in reading, writing, and music.

Research on the causes or sources of such unequal achievement has proliferated in the past twenty years and these findings will be considered next.

Determinants of Academic Achievement

Before looking at the actual determinants of achievement, it is well to remind ourselves that any specific outcome, including the results on an achievement test, can be interpreted as measuring different things depending on one's conceptualization of schooling. As Chase points out, if learning is perceived as a matter of individual ability, then genetic or socio-psychological variables will be seen as primary determinants. Alternately, if learning is perceived to rest with the quality of instruction or the curriculum, then school variables will be seen as key determinants (1983, 73).

Broadly speaking, three types of variables are thought to be of importance in shaping academic achievement. First, there are individual (both genetic and socio-psychological) differences. Then there are what one might call social or group differences such as sex, socio-economic status, class, etc. Finally, there are school differences, which encompass both structural and processual variables. There are also important effects among all three types of variables. For example, a skilled teacher may stimulate and enhance a student's interest in science, which is reinforced at home. However, for the present discussion, the interesting thing about these three types of variables is the differing stress given them by the different theoretical perspectives defined in chapter 4 of this report.

Functionalists, critical theorists, and those engaged in the interpretive paradigm would all agree that individual differences both exist and are important. However, these variables are by and large outside the scope of their theoretical interests. The new sociology of education focuses strongly on school differences, in particular on processual and interactional phenomena within the classroom. Because the interpretive paradigm of these researchers is generally concerned with the micro-analysis of human behaviour, social variables are of limited interest. It is interesting that, while conflict theorists do not see schools as "making a difference" to long-term life chances, they do view schools as institutions reproducing class and other group inequalities that do have consequences for academic performance and life outcomes. Functionalists have generally stressed social determinants rather than school outcomes but this has changed over time. For example, in the 1960s, Coleman's research found no significant school effects whereas Coleman's work in the late 1970s clearly stresses the role of schools.

The School as Source of Unequal Achievement

As we have already mentioned, the social science literature tends to be cyclic with respect to the effects of schools on cognitive outcomes. Twenty years ago, school effects were perceived as minimal with family background accorded a major causal role. In the late 1970s and into the 1980s, schools were once again seen as crucial in the production of academic excellence. One way of understanding this shift is to describe the various reactions to the Coleman report of 1966.

Hurn (1985, 143) sees the modern era of achievement research beginning with James Colemen's study Equality of Educational Opportunity (1966). This highly publicized large-scale study found that student performance was not strongly associated with the quality of schools they attended. Such measures as per pupil expenditures, teacher qualifications, or books in the library had little predictive utility with respect to different test scores. In contrast, IQ scores and measures of home background were more significant. The work of Jencks and his colleagues, Inequality: A Reassessment of the Effect of Family and Schooling in America (1972), replicates Coleman's findings as do the results of studies of school achievement in other countries (Hurn 1985). Thus in the 1960s, many studies indicated that differences in school characteristics had little impact on student learning, and that group differences in test scores bore little relationship to such school resources.

Such findings led some to focus on non-school environments to explain variations in academic achievement. The family has been much studied in this respect. Boocock summarizes much of this material very well (1980, 62, 82):

> However school or academic success is measured, children whose parents have low socio-economic status or who are members of an ethnic minority group that has a relatively low position in society are less likely than others children to achieve it.... The empirical evidence has indicated...little difference among families in their valuation of achievement.... Parents of school achievers not only expect more and communicate this...but they also teach them the behaviour needed....

Another reaction to Coleman's findings was to hypothesize that, since schools were largely ineffective in the face of group differences, perhaps all schools reinforced inequalities in similar ways. The extent to which processes within secondary schools contribute to unequal group achievement remains unclear. Hurn reviews status attainment research, research on tracking, and the work on differences in the social composition of the student body (i.e., peer status and achievement); he concludes that "The balance of the evidence...does not support a conflict interpretation of the role of schools in generating inequality.... By and large, [the large-scale] research tradition says that schools respond relatively meritocratically to enduring differences between students" (1985, 182).

It is interesting that historical research and classroom observation studies, both outside the survey tradition, indicate school processes and experiences that are implicated in differences in ability, grades, and aspirations. Among the historical studies is the work of Tyack, Lowe, and Hansat (1984) on U.S. public schools in the 1930s and after. They view traditional schools as powerful reinforcements of social inequality and argue that what has most damaged modern education is not innovative reform but the survival of this status quo. The works of Bowles and Gintis (1981), E.P. Thompson (1973), and others in the Marxist or neo-Marxist tradition also use historical study to point at the processes by which education reproduces existing social classes and their attendant advantages and disadvantages.

A third general response to the original Coleman report was to reconceptualize what was meant by school. As Richer (1985) comments, one of the strongest criticisms of the major studies of the 1960s was the inadequate conceptualization of the independent variable. The school was seen in economic terms. There was a focus on inputs such as age of building or per student expenditure, with cognitive achievement viewed as output. This conceptualization ignored the process of schooling. Later researchers chose a different approach and focused on school culture including student values and attitudes and teacher commitment and expectations. There was also a concern with school organization including administrative structure and classroom management.

The qualitative studies of schools conducted in the 1970s and 1980s provide in-depth descriptions of school culture and climate. Such works as Goodlad's A Place Called School (1982), Spindler's Doing the Ethnography of Schooling (1982), or Lightfoot's The Good High School (1983) are especially good examples of this tradition. Eisner places all in the area of educational evaluation and all attest to the importance of school process and administration in shaping academic achievement.

Still another reaction to Coleman's original survey in the 1960s was a group of independent studies carried out in the 1970s. These studies were usually of elementary and often inner-city schools in the northeastern United States (Weber 1971; New York State Office of Evaluation Performance 1974; Austin 1978; Brookover et al. 1979, 1983; Venezty and Winfield 1980; Kean et al. 1979), although Rutter's study of twelve London secondary schools is also in this tradition (Rutter et al. 1979). The results of these studies form the basis for the currently popular school effectiveness research.

These studies aim to identify factors that make effective schools and they have been used for policy making and change in an increasing number of U.S. schools (Farrar, Newfield, and Miles 1984). Despite such a promising beginning, school effectiveness research does have limitations (Peebles 1984; Farrar, Newfield, and Miles 1984; Finn 1983). Effectiveness is usually narrowly defined as student achievement on standardized test results. As Garbarino and Asp (1981) point out, this is tautological as the outcome of effective schools is also student achievement. The prevalence of the case study approach and the predominant focus on elementary schools often at the extremes of one effective/ineffective continuum make generalizations difficult to draw.

There are a number of common elements identified by most of these studies. Joyce, Hush, and Kibbin (1983) group them into organizational and instructional categories. The characteristics include strong leadership, clear goals, order and consistent discipline, high expectations of students, teacher efficacy, pervasive caring, public rewards and incentives, community support, high academic learning time, frequent, monitored homework, coherent curriculum, varied teaching techniques, and opportunity for student responsibility.

There are perhaps two ways in which this school effectiveness research can be viewed. First, it constitutes a body of empirical findings that may be of use for policy makers and practitioners. The way in which the various factors interrelate is not yet clear, however, so some caution is advisable. As D'Amico puts it: "school effectiveness may be an idiosyncratic concept which may be different for different schools and different school districts" (1982, 193). Finn (1983) also stresses the need to make the individual school the key organizational unit and to avoid "top down" indiscriminate application of the research findings.

A second way to view this style of research is to see it as part of a broad investigation of student achievement. There are a number of causal variables involved in the outcomes of education. It seems reasonable to include the attributes of school effectiveness and the phenomenon of school effectiveness itself in any developing model of cause and effect.

The Measurement of Academic Achievement

Academic achievement has been practically synonymous with outcomes of education in most of the research reviewed here. And this report, among others (see, for example, Richer 1985), has been rightfully critical of such limited measurement of school outcomes. As will be clear by now, exclusive reliance on cognitive outcomes is inappropriate since schooling involves important affective and behavioural outcomes as well.

It has often been held that academic achievement is the predominate measure because of its unambiguous, standardized, and generalizable nature and its ease of application. While standardized tests may be convenient to administer and the results amenable to statistical analysis, they have a number of measurement problems that raise questions about their unchallenged use to indicate cognitive development.

Most studies use standardized tests to measure learning. Achievement tests measure the accomplishments and information the student has acquired from school and other learning experiences. However, such tests are often used interchangeably with ability tests (such as IQ tests). It is unclear what the distinction between the two tests is. Aptitude tests have also been charged with bias in the sense of being unfair to students who do not have the cultural experiences and skills called for by these tests. Some studies use indirect measures such as highest level of education achieved or further aspirations. However, the correlation between direct and indirect measures is quite small.

Another issue is the tendency to use single measures of cognitive outcomes. This creates problems of validity. In single wave studies, which are the norm, it is also difficult to untangle the effects of schooling from the effects of prior differences. This is especially the case when high achievement is used as both cause and outcome. For example, Garbarino and Asp charge that high achievement is used both as a trait and a consequence in school effectiveness research (1982).

To summarize, research on educational outcomes has generally focused on cognitive outcomes despite the importance of affective and behavioural outcomes. Academic achievement tests are one type of standardized measure of cognitive development but tend to be used interchangably with aptitude tests. The relationship between achievement and attainment (i.e., highest degree obtained) seems small but attainment measures are also used as proxies for achievement. A variety of measures for each major kind of outcome would no doubt give a more rounded picture of the educational process.

CHAPTER SIX

INVENTORY OF EDUCATION DATA SETS

Earlier chapters in this report have looked at outcomes of education in a socio-historical context and in relation to sociological models of education. In this chapter (and the one following), the topic is addressed from an empirical point of view. Beginning with a description of an inventory of data sets compiled for this report, the chapter proceeds to a consideration of the availability of relevant data sets and the deficiencies in existing sources.

A. CREATING THE INVENTORY

Eight major sources were used to compile the inventory of data sets: a) the literature review conducted as part of this project; b) Canadian data archives or clearing houses; c) the research departments of seventeen of the larger school boards in Ontario; d) the Ontario Educational Research Information System (ONTERIS) and Social Science Information System (SSIS) data bases; e) the Ontario Assessment Instrument Pool (OAIP); f) the Directory of Education Studies (Canadian Education Association); g) the Ontario Secondary School Teachers' Federation (OSSTF); and h) the Association of the Larger School Boards of Ontario (ALSBO).

The literature review conducted as part of this project produced a large number of articles, books, and other publications relevant to models and outcomes of education. The majority of these references were theoretical while others were based on analyses of data collected from surveys, focus group interviews, administrative records, etc. For these empirical studies, references to the major data sets used were included in the inventory.

Contact with the Canadian data archives was made via letter, electronic mail using DATAPAC/DATALINK, and telephone. A response was received from all of the twenty-two agencies.

Of the approximately 185 public school boards in Ontario, seventeen have formal research or planning departments headed by a director. In early September, each of these departments was contacted by letter asking them for their assistance in the creation of the inventory and to forward any reports of publications that related to the topic. Follow-up telephone calls were made in early October to those who had not responded. Materials or responses were received from all but one of the boards.

With the assistance of professional librarians, a computerized search was made of the ONTERIS and SSIS data bases using a wide range of keywords and phrases. These key concepts or "keywords" were identified from the literature review and used in the search in conjunction with boolean operators (AND/OR/NOT).

The last two editions of the Directory of Education Studies, published about every two years by the Canadian Education Association, were examined for relevant research employing the use of hard data. In addition, the list of publications or position papers produced by the Ontario Secondary School Teachers' Federation and the Association of the Larger School Boards of Ontario were reviewed. Materials that appeared to be on topic were acquired or purchased. Where the research contained references to other empirical work, follow-ups were made, thus expanding the inventory through the use of "snowball" techniques.

Only data sets produced after 1970 have been included and, as a general rule, the data sets pertain to Canadian secondary education issues. There were a few exceptions to these guidelines: data sets that were unique in methodology or subject matter have occasionally been included. As mentioned earlier, all the research departments in the Ontario school boards have been contacted. Due to the cost factors involved, the huge task of extending the search to the thousands of boards of education across Canada was not attempted.

In the course of compiling the inventory, a problem arose in determining the criteria for inclusion in the inventory (i.e., that the data set relate directly to models of education and outcomes).

This project employed a sociological perspective focusing primarily on the impact of education on individuals, system outcomes, and society as a whole, as opposed to specific administrative, curriculum, and teaching issues. Given this perspective, much current research was deemed too specific and the number of "appropriate" data sets was reduced substantially. As a result, the criteria "relating directly to models of education and outcomes" was relaxed somewhat so as to include data sets that were not quite on topic but had merit on the basis of the measurement or methodologies used. An example is the report by Dilling and his colleagues (1968) on the psychological adjustment of Grade 9 students.

When a problem is examined or an hypothesis tested, researchers have a tendency to collect new data specific to the issue under investigation. The cost of collecting high quality data through rigorous survey techniques has become prohibitive in the current economic climate. As a result, data collection is often done poorly or not done at all. There is little evidence to suggest that individual researchers or agencies analyse archival data thoroughly in order to refine or to answer, even if only in part, their existing questions. Thus the creation of this inventory of data sets had two purposes:

a) to produce a list of data sets researchers can refer to, determine their appropriateness in light of their current and future work, acquire the data set and then perform secondary analyses on these data; and

b) to attempt an examination, at the most general level, of the types, methodologies, and relevance of current education research in Ontario with respect to models and outcomes.

The degree to which these goals have been met is unclear. Definitional problems and criteria for inclusion aside, the number of data sets is somewhat disappointing. Of greater concern are the uneveness of the data, the non-standardized measures used, the poor documentation, the general piecemeal approach of much of the research, the lack of centralization, and difficulties of access.

The inventory is contained in appendix A. The entries are alphabetized by author or agency. Each data set is associated with an identifier (e.g., DS001=data set 001), which can also be used to identify an entry. In total fifty-two data sets are referenced.

B. AVAILABILITY AND DEFICIENCY

Of the twenty-two archives reviewed, only two produced any relevant data sets. These were, however, the better known studies of access to education and equal opportunity models conducted during the 1970s (e.g., Porter, Porter, and Blishen - DS003). While the quality of the documentation for these larger data sets is quite good, for purposes of this project, we did discover one deficiency. In no case did the documentation contain a complete list of variables, measures, indices, or domains used in the data collection. Short of reading the actual survey instrument, which was not always available, it was not possible to determine if the data set could be used to evaluate models, goals, or outcomes of education beyond those intended by the principal investigator(s).

It was discovered through contacts with the boards of education in Ontario that in fact very few (four to be exact) of these research or planning departments conduct any research that is directly relevant to models and outcomes of education. Further, very little "pure" research is ongoing. Most of these departments tend to either produce or process data directly for the trustees of the board, or work exclusively on policy, or specific subject or curriculum planning.

For those boards that did conduct research or collect data on an ongoing basis, a wide range of materials was received. A large proportion of the research, while interesting, was inappropriate to our study. For example, reports on guidance services, seating arrangements, cafeteria food, summer school evaluations, Teledon testing, curriculum implementation guides, test scoring, library-use studies, etc., had little relation to goals per se.

For the remainder of the reports received from the boards and which did bear directly or indirectly on goals or outcomes, we found that the overwhelming majority of them were concentrated in two areas:

a) reporting, developing, or comparing results from standardized achievement tests or IQ tests; and

b) preparation/transition to work or higher education studies.

In both of these areas, survey after survey appeared and, depending on the broadness used to define "outcome", we could have included at least one hundred such studies in our inventory. Unfortunately, many were too limited in scope to be useful to other researchers: the data were often collected for a narrow and specific purpose. As a result, other background or contextual variables were lacking, thereby reducing the usefulness of the data for more general purposes. Thus we began to restrict the inclusion of similar type studies and kept only those that were the most exemplary and general in design, were the least flawed in methodology, contained other background and contextual variables, or were potentially the most useful in future work on goals and outcomes. For example, the inventory includes a large multi-stage survey of students moving through a co-operative education program (see Dhanota, Wright, and Toplak - DS012). At the other extreme is a very small and fascinating history of a longitudinal control study of sixty students and their development of moral reasoning powers (see Burnham - DS021).

The searching of the ONTERIS (Ministry of Education) and SSIS (ISR, York University) data bases produced hundreds of references, many of which could be used only in the literature review as the studies did not make use of original hard data. As is the case with any keyword-oriented file, almost half of the entries were off topic or inappropriate. Of the remainder, two-thirds were position papers, policy or curriculum related research, and other studies of very pragmatic and specific issues not directly applicable to the study of goals and outcomes. The remainder of the entries were again focused primarily on areas of achievement testing and transition to work/higher education, a similar pattern to the one that emerged from the research materials received from the various boards of education. These were screened using similar criteria described above.

One of the problems that surfaced from the on-line searching of the ONTERIS and SSIS data cases was the use of keywords or phrases that are either far too general (e.g., achievement, academic achievement, student achievement) or far too specific (e.g., models of education). Very skillful use of these phrases must be made in conjunction with the AND/OR/NOT operators in an attempt to avoid literally thousands of "finds", most of which were not relevant, or no finds at all. A great deal of time was spent experimenting with keywords and examining the results of the retrieval.

To further demonstrate the problems in using large computerized libraries combined with the subjective definition of "outcomes", the ONTERIS search did not unearth a single research report written by the Scarborough Board of Education, twenty of which were known to be part of the ONTERIS data base and relevant to the topic.

In the course of compiling the data inventory, we were again reminded of the generally poor state of data archives in Canada. For the larger well-known data sets, the quality of the coverage and documentation is excellent; for the small research projects the situation is dismal. Not only are these data sets not finding their way into archives, the documentation is so poor as to render these data useless. Because current contracts emphasize the condition of the final report while largely ignoring the numeric data, researchers concentrate their attention on that report at the expense of the quality and documentation of data. Investigators generally leave many aspects of research design and the data files undocumented and are not sensitive to the information needs of secondary users (Atkinson 1980).

Further evidence of the lack of funding and co-ordination in the area of archival material is provided by the Ontario Education Data Archive (OEDA), developed by the Ontario Institute for Studies in Education and the Institute for Social Research and funded under contract with the Ministry of Education. This archive, which should have produced hundreds of sets of relevant data, contained a total of twenty-two entries. Finally, while the quality and style of documentation used for this archive is excellent, the holdings of the archive have not been updated since the release of the Provisional Catalogue in October 1979.

Another source of data examined was the Ontario Assessment Instrument Pool (OAIP). This resource consisted of a large pool of questions, in a number of subject areas, available to persons responsible for evaluating student performance and school programs. A close examination of this item bank revealed the fact that no section of the bank was dedicated to the evaluation or measurement of some of the more abstract goals of education. We feel that the mandate for this resource should be expanded to include measures or procedures oriented to a wider range of the OSIS goals.

C. SUMMARY AND COMMENTS

For each of the data sets in the inventory we attempted to classify each into a general topic area. For some of the entries this task became a guess where there was a multi-topic nature to the research. Table 6.1 shows the summary of this classification effort.

However crude the scheme used, it clearly shows a heavy concentration of research in the area of the transition from high school. These were largely studies of co-operative education programs, surveys examining the preparedness for work, measurement of student dropout rates, employment opportunity research, accessibility to education, etc. It seems clear that more work must be put into the measurement and evaluation of some of the other more abstract goals of education such as self-worth, good citizenship, or eliminating racism. In the next chapter, this deficiency and need will be further reinforced by an examination of the comments made by various education practitioners at the school board level.

TABLE 6.1

DATA INVENTORY SUMMARY

Type of Study	Number of Data Sets
Transition from School: Achievement/Aspirations/Work/ Co-op Ed/etc.	24
Testing: Achievement or Aptitude	7
Attitude Survey: Purpose of Schooling/Socialization	6
Values: Reasoning/Self-Esteem/etc.	4
Family/Sex Education	1
Education and Women	1
Physical/Health Education	2
Multicultural Issues	2
Other	4
Total	51

CHAPTER SEVEN

INTERVIEWS WITH EDUCATION OFFICERS

An explanation of goals and outcomes of education, as expressed by directors of school boards in Ontario, is presented in this chapter. The discussion, while largely empirical, builds upon ideas and theories detailed in previous chapters.

Interviews were conducted with education officers, usually the director of education, to explore four main questions. First, what goals and outcomes of education are deemed important by those individuals responsible for curriculum planning and implementation? Second, what impact will the implementation of the OSIS goals have on schooling in Ontario? Third, how successful are school boards in achieving selected educational goals and outcomes? Fourth, what are the demographic, educational, and attitudinal characteristics of the respondents? Do educators in Ontario operate within the interpretive, functionalist, or conflict paradigm? (A copy of the questionnaire is included in appendix B.)

The results from the interviews and the conclusions reached from scrutiny of the data are presented in the following sections of this chapter. These results are preceded by a brief report on the administration of the survey.

A. ADMINISTRATION OF THE SURVEY

The list of school boards to be included in the study was abstracted from the 1984 MIDENT file collated by the Statistical Information Services Branch of the Ministry of Colleges and Universities. A school board that:

1. had no schools open in September 1984;
2. did not contain a school with Grades 7 to 13;
3. was very small, isolated, or remote;
4. was a Canadian Forces Base;
5. was on an Indian Reserve; or
6. did not have a Director of Education

were excluded from the study. Letters introducing the survey were sent to the director of education for the remaining 102 boards. After the letters were sent, an initial telephone contact identified eight Roman Catholic Separate School Boards that did not have any schools offering Grade 9 to 13 level classes. These eight boards were eliminated from the telephone survey.

Telephone interviews were completed in 88 of the 94 boards of education that were included in the study. One of the 88 respondents stopped the interview after he had completed about half of the questionnaire claiming that he was too new to his job to be able to give thoughtful replies to the questions. The same reason was given by one of the directors who refused to participate in the survey. Three directors refused to participate because they "did not have time for research" and two, while willing to participate in the survey, could not find time to complete the survey before the end of the data collection on 6 November 1985. The final response rate of 94 per cent, high by traditional survey research standards, allows for confidence in substantive conclusions reached from analysis of the data.

The preferred respondent from each board, the director of education, was interviewed in 55 of the 88 boards that participated in the survey. In the remaining boards, the director had a designate complete the survey. Most often this designate was the superintendent of program (18). Less frequently it was either other superintendents (10) or assistant directors and superintendents (5) who were interviewed. The likelihood of the director asking another officer to complete the survey was correlated with board size. The larger the board, the more often a designate was interviewed. Interviews were completed with board officials other than directors 38 per cent of the time, but officials other than directors were interviewed in 60 per cent of the boards that had more than 20,000 students.

Although the questionnaire was long (39 minutes on average) and many respondents had difficulty keeping appointments, it was not uncommon for respondents, after completing the interview, to make positive comments. One respondent accurately conveyed the general feeling that many participants had once the interview was completed. He said: "I was apprehensive about the interview and annoyed to be asked for one half hour of time [but found] I really enjoyed the interview, it was interesting and stimulating." Not all respondents were positive in their review of the interview. Some were concerned about the general tone of the questions. One respondent said he thought the study was "political" and that it lacked "sincerity". Importantly, positive comments were made five times more frequently than were negative ones.

A final note about the administration of the questionnaire concerns the method of data collection used in the study. Three modes of data collection (face-to-face, telephone, and mail-out) were considered. The cost of conducting a face-to-face interview was prohibitive. The telephone was selected over the mail as the mode of data collection for reasons of data quality. The response to a telephone survey is 10-15 per cent higher (Dillman 1978, 51; Bradburn and Sudman 1979, 7) and item non-response is lower for telephone surveys as compared to a self-administered mail surveys (Dillman 1978, 60).

The use of the telephone to collect the data was commented upon by a small number of the respondents. Six of the 88 respondents, without solicitation, said they would have preferred to have had the questionnaire sent to them before they completed the interview. Two respondents expressed the opposite view. They felt that their spontaneous answers would better reflect board policy and their opinions than would a self-administered questionnaire.

B. DEMOGRAPHIC AND EDUCATIONAL CHARACTERISTICS OF RESPONDENTS

Before discussing the opinions of respondents, it is appropriate to review their demographic characteristics and the position that they held in their board.

Considerable uniformity existed with respect to gender (85 of 88 respondents were male), place of birth (73 of 88 were born in Ontario), and educational achievement (76 of 88 had bachelor's and master's degrees). Variation between respondents did exist with respect to age and place at which they obtained their education (table 7.1).

TABLE 7.1

GENDER, PLACE OF BIRTH, AND AGE OF RESPONDENTS

	No. of Respondents	% of Respondents
Gender		
Male	84	97
Female	3	3
Place of Birth		
Ontario	73	84
Other Canada	5	6
Other	9	10
Age		
55-61	18	21
45-54	48	55
38-44	21	24

The increasing proportion of degrees obtained at the University of Toronto as the level of the degree increases from bachelor's to doctorate is probably more a function of the historically smaller number of institutions that grant postgraduate degrees in the Province of Ontario than any other reason (table 7.2). However, the dominant position of the University of Toronto in terms of fostering awareness about educational policies, such as the implementation and evaluation of OSIS goals, to educational practitioners currently obtaining credentials, should not be overlooked by the ministry.

TABLE 7.2

EDUCATIONAL BACKGROUND OF RESPONDENTS

	% Respondents Obtaining	% Received at University of Toronto*	% Received at Other Ont. Universities	% Received > 61	61-67	< 67
Bachelors	100	35	59	42	37	21
Masters	87	65	24	4	31	65
Doctor	15	77	8	0	15	65

*Including Ontario Institute for Studies in Education (OISE).

Differences between directors and other educational officers, usually superintendents, who were interviewed were virtually non-existent on substantive issues. Superintendents, for example, were as likely to select self-worth as the most important goal of education as were directors and as likely to think that the implementation of the OSIS goals would require changes in the allocation of teachers (table 7.3). Demographic differences were evident: superintendents tended to be younger, have spent less time in their present position, and be slightly less likely to have obtained graduate education than were directors. The important conclusion that can be drawn is that the substitution of another education officer for the directors does not seem to affect the substantive conclusions reported from our analysis of the data.

Table 7.3

COMPARISONS BETWEEN DIRECTORS AND SUPERINTENDENTS OF EDUCATION
FOR SELECTED VARIABLES

Variable	Director	Superintendent
Proportion in Present Position for Less than 5 Years	40%	72%
Proportion 45 Years of Age or Older	91%	50%
Proportion with Masters Degree	91%	73%
Self-Worth Most Important Goal at Personal Level	78%	78%
Very Familiar with OSIS Goals	37%	41%
OSIS Goals Represent a Major Change	24%	25%
Implementation of OSIS will Require Change in Allocation of Teachers	74%	75%
Disagree that Primary Goal of Schooling is to Prepare Students for Job Opportunities	62%	58%

C. GOALS OF EDUCATION

Determining the relative importance and priority given to goals and outcomes of education was a major component of the survey. Two sets of goals and outcomes were considered in this survey. The first set, labelled "Generic Goals" for ease of discussion and to distinguish them from the OSIS goals, are those identified in the literature review section of this report. They include: goals and outcomes of education that have been traditionally identified in literature, graduation, transition to work and higher education, and helping students to develop cognitive abilities; and goals and outcomes given attention more recently, such as helping students develop a sense of self-worth and respect for different cultures and races.

Respondents were twice asked to rate the priority given to each of the generic goals on a 5-point scale (where 1 indicated low priority and 5 indicated high priority). In the first instance they were asked to give ratings for their board, in the second they were asked for their personal rating. Once they rated the goals they were asked to identify the one given the highest priority in their board and the goal they personally thought should be given the highest priority.

As is evident in table 7.4, respondents overwhelmingly selected self-worth as the goal given highest priority both at the board and personal level. Indeed the proportion of times that self-worth was selected (51 per cent) was four times more frequent than the goal given second highest priority (cognitive abilities, 13 per cent) at the board level. When speaking for themselves, respondents selected self-worth (78 per cent) almost 9 times more frequently than the goal given second highest priority (cognitive abilities, 9 per cent). Although self-worth was clearly identified as the goal given most importance at the board and personal level, it would be incorrect to assume that educators did not see other goals as being important. The highest possible rating, 5, was given to the development of cognitive abilities (board = 41 per cent, personal = 49 per cent) and to development of respect for cultures and races (board = 44 per cent, personal = 59 per cent) by almost half of the respondents (table 7.5).

TABLE 7.4

GENERIC GOAL GIVEN HIGHEST PRIORITY: BOARD POLICY AND PERSONAL OPINION

	Diploma	Cog. Abil.*	Work	College University	Cultures Races	Self-Worth	Refused
Board	8%	13%	11%	3%	3%	51%	10%
Opinion	1%	9%	2%	0%	1%	78%	8%

*Cognitive Abilities

Rows do not total to 100 per cent because of rounding.

TABLE 7.5

PROPORTION OF HIGH AND LOW SCORES GIVEN TO GENERIC GOALS: BOARD POLICY AND PERSONAL OPINION

	Diploma	Cognitive Abilities	Work	College University	Cultures Race	Self-Worth
	PROPORTION OF TIMES GOAL GIVEN SCORES OF 5 (HIGHEST PRIORITY)					
Board	36%	41%	34%	23%	44%	71%
Opinion	17%	49%	26%	10%	59%	90%
	PROPORTION OF TIMES GOAL GIVEN SCORES OF 1-3 (LOW PRIORITY)					
Board	25%	6%	33%	32%	24%	7%
Opinion	41%	13%	38%	51%	8%	1%

Rows do not total 100% because of rounding.

From the information presented in tables 7.4 and 7.5, it is evident that educators see some goals and outcomes of education as being more important than others. Clearly helping students to develop a feeling of self-worth is a primary goal. The development of cognitive abilities and the development of respect for different cultures and races can be considered as secondary goals. These goals are second only to self-worth in the number of times they have been given a high score and both goals are much less frequently given low scores (cognitive abilities at board level = 6 per cent and cultures and races at personal level = 8 per cent) than are other goals. Finally, preparation for work, getting into college or university, and obtainment of a diploma can be considered as tertiary goals and outcomes of education. These goals are less often given a high score and more often given a low score than are given to primary (self-worth) or secondary (cognitive abilities and culture and races) goals (table 7.2). This classification is more evident at the personal than at the board level. Indeed, two aspects of the relationship between board policy and personal belief demand attention. First, the three goals that are most often ranked high by respondents when they speak for the board, self-worth, cultures and races, and cognitive abilities, are all ranked high more often when respondents give their personal view.

Second, the goals most often given low priority at the board level were given low scores by respondents even more often when they spoke for themselves. Preparing for work (board = 33 per cent to personal = 38 per cent), getting into college or university (32 to 51 per cent), and obtaining a diploma (25 to 41 per cent) highlight this trend.

Thus far three conclusions have been drawn from an examination of tables 7.4 and 7.5. First, educators identify self-worth as the most important goal of education. Second, three categories of goals have been identified. Third, although respondents give the same ranking to goals and outcomes of education, differences do exist in the degree of importance they give to goals and outcomes when they are speaking for themselves rather then for the board.

These conclusions are tempered, but not changed, by the data presented in table 7.6. Clearly, the first conclusion, the primacy of self-worth, is sustained. The mean score for self-worth is substantially higher, especially at the personal level, than is the mean score for all of the other goals.

TABLE 7.6

MEAN SCORES AND T VALUES
COMPARING BOARD POLICY AND OPINION FOR GENERIC GOALS

	Diploma	Cognitive Abilities	Work	Colleges Univer.	Cultures Races	Self-Worth
Board $\bar{x}$	4.1	4.3	4.0	3.8	4.1	4.6
Opinion $\bar{x}$	3.6	4.3	3.7	3.5	4.5	4.9
T Value	4.5**	.1*	2.3*	3.2**	3.9**	3.5**

* significant at the .01 level
** significant at the .001 level

The second conclusion, the classification of goals into three levels, is only partially supported. At the personal level the three classes -- primary (self-worth = 4.9) secondary (cultures and races=4.5, and cognitive abilities=4.3), and tertiary (work=3.7, diploma=3.6, and college or university=3.5), -- can be identified. The difference between the mean score within each class is small, while the difference between the mean scores for each class is, comparatively speaking, much larger. However, at the board level the classification breaks down. The differences in the mean scores do not suggest three classes. Indeed the difference between the goals with the second highest mean score and the goal with the lowest mean score ".5" (cognitive abilities 4.3 - college or university 3.8 = .5) is half the same difference calculated at the personal level (cultures and races 4.5 - college or university 3.5 = 1.0).

The third conclusion, that there are differences between board policy and the personal opinion of the directors, is broadly supported. Calculation of the T value for each of the six pairs of scores indicates that a significant difference exist for five of the six scores. Only cognitive abilities is not given a significantly different rating by respondents when they distinguish between board policy and their personal beliefs. Unlike the other goals, differences in ratings are not, in the main, in one direction. As many respondents give it a higher rating as give it a lower rating at the personal level. As a result the mean score is the same.

An explanation for the relationship between board policy and the personal opinion of one of the board's most important members is difficult to hypothesize. However, it is interesting to note that the opinion of directors and their designates tends to intensify the different levels of priorities given to goals and outcomes of education within school boards of Ontario. The extent to which directors of education in Ontario influence the formation and implementation of educational policy is not clear. However, a better understanding of the interaction between Ministry of Education guidelines, board policy, and the views held by directors of education must be obtained in order for the Ministry of Education to develop optimal strategies for implementing changes in goals and outcomes of education.

The unsolicited comments given by respondents when they were asked to rate the generic goals of education, have bearing on our considerations about the relative importance of each of the six generic goals. Respondents who selected self-worth felt that it was an all encompassing goal. They reasoned that in order for students to develop self-worth, they have to develop cognitive abilities. In order to have self-worth, students needed to have self-respect and it was only when students had self-respect that they could develop respect for others. If a student had self-worth and cognitive abilities, then the chances were, they argued, that the student would graduate and be successful either at work or pursuing higher education. One respondent succinctly summed up the theme. He stated: "Self-worth is the key, it leads to all other areas, all other goals." Respondents stressed the interrelationship among the goals. Self-worth in this line of thinking was not necessarily more important than other goals, but was a cornerstone that with other goals and outcomes of education, would help provide students with a solid foundation for future life. One respondent stated: "If students don't have self-worth, all other [goals] mean nothing."

It is appropriate to note that respondents had other comments about the goals and outcomes of education that merit attention. Respondents argued that different outcomes of education were important at different times in a student's development. Indeed some educators felt that different goals were important for different students all through their educational careers. Differences between general level and academic students were often raised. One respondent went as far as to argue that the questionnaire should have been "divided into two sections: one for advanced level students and one for general level students." Educators in boards that had some schools in mainly rural areas distinguished between students who would stay "on the farm" and those who would "go to town".

Many educators had well reasoned opinions about the goals and outcomes of education. Clearly they saw goals as being complex, interrelated, and dependent on the type of student. They also saw self-worth as being the most important goal of education, gave different priorities to classes of goals and outcomes, and had opinions about levels of importance that should be attached to goals and outcomes of education that were different from those of their board.

D. OSIS GOALS

The vast majority of respondents reported themselves to be either very familiar (38 per cent) or familiar (57 per cent) with the thirteen goals of education outlined in the OSIS document. There is some evidence to suggest that their familiarity is recent. Many respondents reported that copies of the goals were presently circulating in their board. Indeed 23 of the 88 respondents volunteered to the interviewer that they had a copy of the goals on hand when the first questions about the OSIS goals was asked.

Eighty per cent of the respondents were willing to identify what they saw as the most important OSIS goal. Second and third most important goals were identified by 67 and 58 respondents respectively. To what extent respondents did not identify the three goals they thought were most important because they could not remember the goals well enough to do so and to what extent the respondent felt that all the goals were important is not clear. Many respondents did mention the interrelationship and overlap of the goals. Certainly respondents were reluctant to identify goals that they considered to be less important. Twenty-five respondents identified a least important goal, 12 respondents identified a second least important goal, and only 3 respondents identified a third least important goal.

Not surprisingly, the goal most often selected as being most important was self-worth. The importance of self-worth vis-à-vis other goals is evident in table 7.7. A score is calculated for each goal by giving it 3, 2, or 1 point for each time it was selected as the most, second most, or third most important OSIS goal respectively. The highest possible score is 210 (if the goal was selected as being most important by all 70 respondents 70 x 3 = 210). Only goals that received a total score of more than 25 are included in table 7.7.

Self-worth, with 145 points, scores as high as the next six goals combined. The OSIS goal with the second highest score "the basic knowledge and skills needed to comprehend and express ideas through words, numbers and other symbols" is the OSIS goal that best parallels the generic goal cognitive abilities. As in the generic goals, cognitive abilities is second to self-worth. Indeed the third and fifth ranked OSIS goals, "responsiveness to the dynamic process of learning" and "resourcefulness, adaptability, and creativity in learning and living," can be considered as extensions of the generic goal of cognitive abilities. Perhaps most interesting is the lack of identification of the OSIS goal that best parallels the generic goal cultures and races, "esteem for the customs, cultures and beliefs of a wide variety of societal groups," as an important OSIS goal.

Table 7.8 lists those OSIS goals that were identified as being of less importance. (Negative scores were calculated in the same manner as were the positive scores in table 7.7: the higher the score the less important the goal). The most important fact to note about the table is the limited number of times that respondents selected any goals as being less important. One of the goals singled out as being less important "skills and attitudes that will lead to satisfaction and productivity in the world of work" was also one of the less important generic goals. Three others, "artistic expression," "environment," and "physical fitness," that were given less importance are specific in nature. The specificity of these less important goals is in contrast to the more general nature of the OSIS goals singled out as being more important.

TABLE 7.7

OSIS GOALS IDENTIFIED AS BEING MORE IMPORTANT

Goal	No. of 1st Selections	No. of 2nd Selections	No. of 3rd Selections	Total Selections	Score
Self-worth[1]	40	10	5	55	145
Basic Knowledge[2]	5	11	7	23	44
Dynamic Process[3]	9	5	2	16	39
Personal Responsibility[4]	2	10	12	24	38
Learning & Living[5]	6	5	7	18	35
Ethical or Religious[6]	4	5	6	15	28
Self-Reliance[7]	1	8	7	16	25

[1] A feeling of self-worth.
[2] The basic knowledge and skills needed to comprehend and express ideas through words, numbers and other symbols.
[3] Responsiveness to the dynamic process of learning.
[4] An acceptance of personal responsibility in society at the local, national, and international level.
[5] Resourcefulness, adaptability and creativity in learning and living.
[6] Values related to personal ethical or religious beliefs and the common welfare of society.
[7] Skills that contribute to self-reliance in solving practical problems in everyday life.

To conclude, examination of the way in which respondents rated the OSIS goals was, in general, in accordance with the way in which they rated the generic goals. Self-worth was the most important OSIS goal, variation existed in the importance attached to the OSIS goals, and respondents noted that the goals were not mutually exclusive.

TABLE 7.8

OSIS GOALS IDENTIFIED AS BEING LESS IMPORTANT

Goal	Least Important	2nd Least Important	3rd Least Important	Total Selections	Score
Artistic Expression[1]	4	2	1	7	-17
Environment[2]	4	2	0	6	-16
Work[3]	3	2	0	5	-13
Dynamic Process[4]	4	0	0	4	-12
Physical Fitness[5]	3	0	1	4	-10

[1] Satisfaction from participation and from sharing the participation of others in various forms of artistic expression.

[2] Respect for the environment and a commitment to the wise use of resources.

[3] Skills and attitudes that will lead to satisfaction and productivity in the world of work.

[4] See table 7.7.

[5] Physical fitness and good health.

E. IMPACT OF THE OSIS GOALS

One-quarter of the respondents thought that no change would result from the incorporation of the OSIS goals. One-half of the respondents thought the changes would be minor and the remaining quarter thought they would be major. It is likely that the amount of change respondents predicted as a result of the OSIS goals of education may be overstated. Respondents often alluded to other aspects of the OSIS program, especially "fast tracking", that were not necessarily related to the goals of education as outlined in the OSIS document.

Almost all respondents who viewed the OSIS goals as a change in educational policy reported that they saw changes in curriculum resulting from OSIS. Respondents were able to suggest as many curriculum changes as they wished. Half of the respondents suggested two curriculum changes and almost a third suggested three ways in which curriculum would change. (In tables 7.9 and 7.10 the percent of respondents refers to the number of respondents who mentioned the change, while the percent of responses indicates what proportion each change represented of all the changes.)

TABLE 7.9

CURRICULUM CHANGES PREDICTED AS A RESULT OF THE
IMPLEMENTATION OF OSIS GOALS

Change	Number	Percent of Respondents	Percent of Responses
Back to Basics	36	62	29
Emphasis on Specific OSIS Goals	33	57	27
Emphasis on Specific Subject Area	21	36	17
Creates Precision in Course Guidelines	16	28	13
Increase in Number of Co-op Programs	12	21	9
Less Technical Education	7	12	5
Total	125	100	

Massive variation existed among the respondents on the specific type of curriculum changes that would result from implementation of the OSIS goals. The most commonly mentioned curriculum change predicted was the "back to basics movement." Some respondents used the term "back to basics," while others talked about "less variety in the number and scope of courses", while still others referred to the "increasing emphasis" they saw being placed on "core courses" such as mathematics and English (table 7.9).

The back to basics theme presented by respondents may be as much a reflection on why the Ministry of Education produced the goals as on the content of the goals themselves. Almost two-thirds of the respondents felt that the Ministry of Education produced the OSIS goals as a political response to public demand. They saw the goals being a reaction to pressure put on the ministry by parents, employers, and universities. Indeed, some respondents were quite cynical about the introduction of the OSIS goals. They saw them as a "simple way of saving money by scrapping Grade 13. They increased compulsory learning...to save money." The real intent of the OSIS program, these respondents argued, was the reduction of high school to four rather than five years, the corresponding reduction in teaching staff in the province by twenty per cent, and the cost savings in education that would be accrued by the government of Ontario. Many respondents saw the back to basics movement as an overreaction by the ministry to public pressure. They are "using a hammer to kill a fly," said one respondent. Although almost a third of the respondents saw the OSIS goals as a "back to basics" document, one respondent seemed to capture the tone of many respondents when he claimed that the OSIS guidelines were so vague in construction that you could "find anything you wanted in them." He continued by saying that the real cleverness to the OSIS goals was how anyone with any strong ideological position could be satisfied by the OSIS goals. "They are," he concluded, "politically very clever".

A minority of respondents saw the OSIS goals as a "fundamental change" in the goals of schooling in Ontario. These respondents saw the OSIS goals as "an honest attempt" to update education in Ontario. However, more often, respondents saw the OSIS goals as giving clarification and precision rather than new direction. Indeed twenty-eight per cent of the respondents specifically offered this opinion.

The second and third common curriculum changes foreseen by respondents are interrelated and bunch a number of similar themes together. Some respondents felt that a curriculum would be developed to promote the OSIS goals of self-worth, preparation for work, and multiculturalism. Others thought the OSIS goals would put greater emphasis on specific courses. Variation was evident in the courses that directors thought likely to change. Five different subject areas were mentioned at least once including French, physical education, arts and music, community studies, and technical courses. Most of the specific courses mentioned can be related to a specific OSIS goal. For example, physical education to "physical fitness and good health," arts and music to "Satisfaction from Participating and from sharing the participation of others in various forms of artistic expression." As is to be expected, and as is evident in table 7.7, many respondents saw the OSIS goals as the determinants of curriculum change in Ontario schools in the coming years.

The final curriculum change that was mentioned by more than ten respondents was the probable increase in co-operative programs. Respondents who mentioned co-op programs saw them as a specific example of how the educational system would more fully integrate the world of schooling with the work world.

Given the degree of change or redefinition of courses and outcomes of education it is not surprising that more than half of all respondents and three-quarters of the respondents who thought OSIS represented change in educational policy reported that implementation of the OSIS goals would require changes in the allocation of teachers to subjects in schools. Also more than three-quarters of respondents believed that teachers would need more formal guidelines on how to achieve the goals. A reasonable policy initiative on the part of the Ministry of Education would be to provide boards and schools with new programs and modification of existing programs to help teachers achieve the OSIS goals.

Respondents saw several changes in educational policy resulting from the implementation of the OSIS goals. These changes in policy reflect, in part, the curriculum changes outlined above and are often complementary to them. The major changes in educational policy are listed in table 7.10. Again each respondent could give more than one response and about a third of the respondents who were asked this question did so.

TABLE 7.10

EDUCATIONAL POLICY CHANGES REPRESENTED BY OSIS GOALS

Change	Percent of Number	Percent of Respondents	Responses
Back to Basics	16	28	18
Emphasis on Specific OSIS Goals	34	59	38
Political Structure of Education	14	24	16
Less Technical Education	10	17	11
Emphasis on Thought Processes rather than Course Content	9	16	10
Others	6	10	7
Total	84		100

A fair proportion of the responses to the question of changes in educational policy represented by the implementation of the OSIS goals were, like the changes foreseen in curriculum, tautological. The most common changes in policy mentioned were the OSIS goals themselves, particularly self-worth and multiculturalism (table 7.10). The "back to basics" movement was less often reported as a policy change than it was as a curriculum change.

The decreasing emphasis on technical education was reported as a change in educational policy more often than it was reported as a change in curriculum. It should be noted that there was limited correlation between the responses given for curriculum change and changes in educational policy. Those who mentioned back to basics and decreasing emphasis on technical education as curriculum changes were not likely to mention them as changes in educational policy and vice versa. Curriculum changes and policy changes were viewed as distinct issues by respondents even though considerable differentiation seemed to exist on what was a curriculum or educational policy change. As a result, it is only by combining the information from tables 7.9 and 7.10 that an accurate reading can be given to the extent of these changes. About three-quarters of the respondents mentioned the "back to basics" tone of the OSIS goals at some point in the interview and about a third of the respondents noted the decreasing emphasis in technical education.

The final policy changes identified by respondents reflect a theme that was often given consideration by respondents but not fully investigated in the questionnaire. Respondents saw the OSIS goals as changing the emphasis in education from the content of the subject to the thought process. "More thinking, less memorization" best exemplified this idea.

Before concluding our discussion of the OSIS goals, it is worth noting that only two of the 88 respondents thought that the OSIS goals were not a good representation of what "the Ontario public think education should be." A caveat should be given attention. Most educators thought that the goals represented public demand, but the public were, they felt, by and large unaware of the true nature of the OSIS goals.

F. MEASUREMENT OF GOALS AND OUTCOMES OF EDUCATION

Respondents reported that their boards of education had a high degree of success in helping students achieve four of the six generic goals of education (diploma, cognitive abilities, college or university, and self-worth). Approximately one-third of the respondents did not consider their board as successful in helping students prepare for work and develop respect for different cultures and races (table 7.11).

It is important to note that the respondents, by and large, did not report that their board was unsuccessful; rather they said they were neither unsuccessful nor successful. The fact that preparation for work was given a low priority by respondents (see tables 7.4 and 7.5) may help to explain why educators view their success in preparing students for work as being more limited than their success in achieving other goals of education. This explanation must, however, be considered as only partial as respondents usually rated their boards as successful in helping students to achieve a diploma even though this goal was given a low priority in most school boards.

TABLE 7.11

SUCCESS OF BOARD IN ACHIEVING GOALS

Goal	Unsuccessful	Neither Unsuccessful nor Successful	Successful
Diploma	0%	8%	82%
Cognitive Abilities	1%	15%	84%
Work	6%	27%	67%
College or University	1%	4%	95%
Cultures & Races	5%	35%	60%
Self-Worth	0%	14%	86%

Comments made by educators may be helpful in understanding why they rated their boards as less successful in preparing students for work. The issue of schooling and the transition to work was a somewhat sensitive issue for most educators. They recognized that employers and parents criticize schools for the lack of job skills they provided. On the other hand, educators complained that job skills were changing so rapidly that it was impossible to stay abreast of changing employment needs. This conundrum was best expressed by the respondent who said: "we can't do it. Technology is changing too fast to train students for jobs. We can't be preparing students [for jobs] we can't anticipate." The neutral position, adopted by about a third of the respondents, represents the respondents' belief that the board has limited responsibility to prepare students for work, as much as their belief that they may not necessarily be successful in preparing students for work.

The other goal that respondents were less likely to rate their board as successful in achieving was helping students to develop respect for different cultures and races. Again the neutral rather than unsuccessful position accounts for most of the non-successful ratings given. The neutral position is a reflection that some respondents felt that helping students develop respect for different cultures and races was not a goal that could easily be measured in areas that were very homogeneous in their student population. Boards in major urban areas, boards with a significant minority of French students in the east and north of the province, and boards with a substantial Native student population were those that had put considerable effort into helping students develop respect for different cultures and races. Respondents in other areas that had few easily identified minorities, would be much more likely to indicate that their board was neither successful nor unsuccessful in helping students achieve this goal.

Predominantly successful ratings were given by educators when they rated their board's success in obtaining the other four goals of education (82 per cent for diploma, 84 per cent for cognitive abilities, 95 per cent for college or university, and 86 per cent for self-worth). This high level of success in achieving these goals of education given by educators who are in an excellent position, albeit potentially a biased one, to rate the success of the Ontario educational system is an encouraging finding. However, this reported success in achieving goals of education is not accompanied by agreement on how to measure the degree to which a board is successful in obtaining goals of education. Indeed, measurement of goal achievement, the topic to which we will now turn, is a difficult and sometimes frustrating subject for many educators.

Respondents were asked how they thought their board could best measure the degree of success they were having in obtaining four of the OSIS goals. These goals were helping each student to acquire: one, basic knowledge (needed to comprehend and express ideas through words, numbers, and other symbols); two, (skills that lead to productivity in the world of) work; three, (skills that contribute to) self-reliance (in solving practical problems in every day life); and four, (esteem for the) customs, cultures, and beliefs (of a wide variety of societal groups). In addition to these four OSIS goals, respondents were asked how their board measured the degree of success they had in obtaining the generic goal self-worth. Respondents could list more than one measure for each of the goals they were questioned about.

Educators had specific well defined ways, which we will call hard measures, to monitor how successful their board was in helping students to acquire basic knowledge and work skills, the most concrete of the goals that they were asked about. These "hard measures" for "hard" goals are summarized in table 7.12.

TABLE 7.12

HARD MEASURES FOR HARD GOALS

Basic Knowledge	No. of Responses	Percent of Respondents	Percent of Responses
Testing	70	82	69
Subjective Teacher Evaluation	23	27	23
Subjective Evaluation by Board and/or Ministry	5	6	5
Others	3	4	3
Total	100		100
Work Skills			
Information from Employers	52	68	48
Longitudinal Studies of Former Students	25	32	23
Program Evaluation with Particular Reference to Co-op Programs	19	25	17
Others	13	17	12
Total	109		100

Most respondents (80 per cent) acknowledged that testing was the most appropriate way to determine how successful boards were in helping students acquire basic knowledge. Variation existed with respect to the form that the test should take. Some respondents stressed that they believed testing should only be at the school level, others suggested standard testing for the board and others suggested that provincial examinations should be held. Although the more traditional written test was most often cited as a measure for basic knowledge, oral testing, especially in a form that included an audience, was suggested by some respondents.

A substantial minority of respondents (27 per cent) felt that subjective teacher evaluation was the most appropriate way to determine how successful their board was in helping students achieve the basic knowledge required to comprehend and express ideas. Both testing and teacher evaluation of students is, as was documented in chapter 6, well established in Ontario schools, and boards of education will have no difficulty in monitoring their success in obtaining this OSIS goal.

Respondents had fairly specific and well defined measures on how to determine their success in providing students with the skills and attitudes that would lead to satisfaction and productivity in the world of work. Two-thirds of the respondents recognized the need to obtain information from employers in order to determine how successful their board was in preparing students for the work world (table 7.12). The need to speak to former students about their work experience was identified by a substantial minority of the respondents (32 per cent). Respondents saw survey research, particularly in the form of longitudinal studies, as the preferred way to gather information from employers and former students.

The final measure identified by respondents as a way in which to measure students preparation for the work world, program evaluation, especially of co-op programs, can be viewed as a combination of the first two measures. Clearly evaluation of a co-operative program would involve discussions with employers and students.

As was detailed in chapter 6, current research on educational outcomes conducted by boards of education in Ontario, often focuses on the question of transition to work. Boards of education have experience in gauging their effectiveness in achieving the OSIS goal of preparing students for the world of work.

The ways in which educators believed the remaining goals - the more abstract or soft goals of education (self-worth, self-reliance, and esteem for customs, cultures, and races) - should be measured were more general in scope, less well defined, and can be termed soft-measures. The proportion of respondents who felt it was difficult if not impossible to measure the degree of success that their board had in achieving the soft goals was substantially higher than the proportion who thought it difficult to measure board success in achieving hard goals. For example, twice as many respondents believed it was difficult to measure how successful their board was in helping students acquire self-reliance as found it difficult to determine their success in preparing students for work.

TABLE 7.13

SOFT MEASURES FOR SOFT GOALS

Self-Reliance	No. of Responses	Percent of Respondents	Percent of Responses
Observation	49	64	58
Survey Research	18	24	21
Program Evaluation	9	12	11
Testing	18	24	21
Total	84		100
Customs, Cultures, and Beliefs			
Observation	42	49	46
Survey Research	18	21	20
Monitor Statistics from Existing Agencies like Human Rights and Police Commissions	19	22	21
Level of Student Activity in Charitable Causes	6	7	6
Other	7	8	7
Total	92		100
Self-Worth			
Observation	48	90	67
Survey Research	11	22	15
Other	14	27	18
Total	73		100

The most common soft measure for all of the soft goals (self-worth, self-reliance, and customs and cultures) was observation. To some respondents, observation was simply watching the students in every-day classroom activities. To others, observation was much more elaborate. Role playing, where students were put in "risk situations" (self-reliance); observation of how students interact with students from different social and ethnic backgrounds outside as well as inside the classroom, where outside the classroom included observing which students congregated together at lunch hour; and, the composition of athletic teams and clubs, such as school government (customs and cultures), are examples of a more elaborate approach to observation.

Educators were not satisfied with observation, the measure they most often identified as the best way to determine their success in obtaining the soft goals. Forty per cent of respondents specified the need for research into developing specific and well defined or hard measures for the more abstract or softer goals of education (table 7.14). The need for hard measures of soft goals is concomitant with the need for specific programs to help educators achieve the more abstract or softer OSIS goals such as self-worth, self-reliance, and esteem for the cultures, customs, and beliefs of others. Educators believe that the Ministry of Education should foster research on how to implement and achieve the goals of education as outlined in the OSIS document. Specific program and hard measures for soft goals must be given priority by the ministry if it hopes to be successful in achieving the OSIS goals.

Specific measurement tools that could be adopted by the ministry for the softer or more abstract goals have been identified by educators. Survey research that contains both psychological and attitudinal measures could, respondents argued, be developed to test self-worth, self-reliance, and esteem for customs and cultures. In addition, a substantial number of respondents suggested that monitoring of student involvement in social/charitable causes and monitoring the number and types of incidents brought before human rights and other tribunals would be effective measures for indicating the success that schools were having in helping students to develop esteem for the customs, cultures, and beliefs of a wide variety of peoples.

Educators indicated that the effort allocated to measuring the board's success in achieving the soft goals of education was extremely limited. This finding parallels the finding noted in chapter 6 that only a modicum of research has been conducted on the relationship between education and students' sense of self-worth, self-reliance, and other abstract goals of education.

Interestingly, almost a fifth of the respondents believed that additional research was required before the OSIS goals of education could be considered complete (table 7.13). Educators thought that attention should be given to defining goals for general level and rural students. One respondent stated that the "ministry needs to take a look at Education North of Steeles Avenue." Respondents also thought attention should be given to the goals of education in other countries and to what extent these goals would have to be adjusted to be operative in a "rapidly changing and technically oriented society." How, asked one educator, are we to "instill self-worth in students who will be unable to find work upon graduation"?

TABLE 7.14

RECOMMENDATIONS FOR FUTURE RESEARCH

Recommendation	No. of Responses	Percent of Respondents	Percent of Responses
Evaluate Board Success in Achieving Goals	35	40	33
How to Implement Goals	26	30	24
The Learning Process	19	22	18
Identification, Refinement of Goals	15	17	14
How to Involve Public in Educational System	7	8	6
Others	5	6	5
Total	107		100

G. INSTITUTIONAL CHARACTERISTICS AND ATTITUDES OF RESPONDENTS

Thus far in the analysis, respondents from all school boards have been implicitly treated as a homogeneous group. In this section of the chapter, the size of the school board, the type of board that respondents were from (separate or public), and the underlying concepts of education held by respondents will be detailed. Important relationships between these institutional characteristics and attitudes of the respondents and the findings thus far presented in this chapter will also be scrutinized.

TABLE 7.15

COMPARISONS BETWEEN RESPONDENTS FROM LARGE AND SMALL SCHOOL BOARDS FOR SELECTED VARIABLES

Variables	Large School Boards	Small School Boards
Self-worth Most Important Goal at Personal Level	78%	77%
Very Familiar with OSIS Goals	43%	27%
OSIS Goals Represent a Major Change	21%	31%
Implementation of OSIS Will Require Change in Allocation of Teachers	72%	81%
Ministry of Education Produced OSIS Goals for Political Reasons	87%	84%
Disagree That Primary Goal of Schooling is to Prepare Students for Job Opportunities	60%	62%

Review of table 7.15 suggests that differences in some substantive issues were minimal between large and small school boards. (Small boards, comprising 30 per cent of the sample, were defined as boards that had less than 10,000 students.) The selection of self-worth, for example, as the most important goal of education was independent of board size. The larger differences for substantive issues that relate to board size are not surprising. Given the smaller number of teachers it is more likely that changes in curriculum will necessitate changes in teachers allocation in the smaller boards. Correspondingly, greater likelihood of changing teacher allocation probably reflects the extent of change that OSIS goals are seen to represent. In addition, the extent to which the OSIS goals represent the need for new courses is probably also a reflection of board size. The smaller the board the more likely courses in subjects such as arts and music, second language courses, and physical fitness will have to be added to the curriculum.

Comparisons between educators from the separate and public school system on substantive issues, unlike comparisons based upon board size and who was interviewed, reveal considerable differences in attitude and belief. With respect to goals of education, education officials from separate boards are more likely to select self-worth as the most important educational goal and less likely to disagree with the statement: "the primary goal of schooling is to equip young persons with the specific knowledge required for job opportunities" than were officials from the public school boards (table 7.16). Also, respondents from separate boards, compared to respondents from public boards, were less likely to state that the OSIS goals were politically motivated, and were more likely to express familiarity with the OSIS goals, see the OSIS goals as a major change, and see a greater need for change in the allocation of teachers as a result of the implementation of the OSIS goals.

TABLE 7.16

COMPARISONS BETWEEN RESPONDENTS FROM SEPARATE AND PUBLIC SCHOOL BOARDS FOR SELECTED VARIABLES

Variables	Separate School Board	Public School Board
Self-Worth Most Important Goal at Personal Level	90%	72%
Very Familiar with OSIS Goals	42%	30%
OSIS Goals Represent a Major Change	30%	21%
Implementation of OSIS Will Require Change in Allocation of Teachers	81%	64%
Ministry of Education Produced OSIS Goals for Political Reasons	53%	71%
Disagree That Primary Goal of Schooling is to Prepare Students For Job Opportunities	54%	71%
Proportion of Respondents Who Agreed or Strongly Agree That Education Should Be Provided Within a Single Education System	13%	73%

The most substantial difference between educators from the two board types was whether they agreed with the statement: "In a pluralistic multicultural society, governments have the responsibility to provide the best education possible in a single educational system." Seventy-three per cent of the education officers from the public school boards agreed or strongly agreed with the statement. Almost six times fewer respondents from the separate school boards, 13 per cent, agreed as strongly with this statement.

The statement about a single educational system prompted many respondents from the public school boards to make comments about the separate school funding issue. Some saw it as a factor that would "destroy public education in Ontario." One clearly agitated respondent noted that "it was a negation of many of the [OSIS] goals we are trying to achieve, particularly number 10 [esteem for culture, customs, and beliefs]." Another thought that "divisions among students [along religious beliefs] will be a major issue down the road."

The final characteristic to be considered is the underlying concepts or models of education endorsed by respondents. Respondents were asked to agree or disagree with a number of statements designed to show the extent to which they could be identified as having functional, conflict, or interpretive perceptions on educational outcomes. (See question 5 of the interview schedule in appendix B for a complete inventory of the questions used in the agree/disagree statements.)

The statement: "In order to truly understand schools we must gain insight into the social life of the classroom and the interpersonal relationships between and among students and teachers," identified the extent to which respondents accepted the concepts of education as expounded by advocates of the interpretive paradigm of education. Ninety-four per cent of respondents either agreed or strongly agreed with this statement. Clearly, educators in the province of Ontario embrace many of the concepts of the interpretive paradigm.

The extent to which educators accept the main tenets of the functionalist and conflict models is less clear. Factor analytic techniques were used to identify main dimensions that would help explain the variation in respondents' answers to the agree/disagree statements. The results of a varimax (orthogonal) rotation indicate that the two dimensions or factors that have the most explanatory power could aptly be described as representing a functionalist and a conflict model of education. They explain 22 and 15 per cent of the total variation in the respondents' answers to the statements. Caution must be made in interpreting these factors as the amount of variance explained and degree of correlation between the statements is low.

The functionalist dimension includes respondents who are likely to believe that:

1. all people have equal opportunity to benefit from education;
2. high status positions are achieved on the basis of merit;
3. schools must sort and select among their students if the most competent and skilled are to move into adult roles;
4. initial economic or cultural handicaps do not substantially affect achievement levels; and
5. schools are effective in producing cognitive skills.

Respondents who have a more conflict orientation with respect to education outcomes are likely to think that:

1. schools serve the interest of elites;
2. schools teach students to follow orders and respect the authority of the teacher; and
3. the major concern of schools are the teaching of middle-class manners.

Unlike the interpretive paradigm, educators do not overwhelmingly embrace either the functionalist or conflict model of education. Their personal beliefs may be more functionalist than Marxist with a strong acknowledgment to the interpretive model of education. The models are less mutually exclusive in practice than they are in theory. Educators in Ontario are catholic, in the broadest sense of the term, in their view of education.

H. CONCLUSIONS

Review of the ideas set forth in this chapter leads to four conclusions and two recommendations. The conclusions will be considered here. Recommendations are specified in the final chapter.

The first set of conclusions deals with goals and outcomes. Educators stress the interrelationship between educational outcomes and note that many goals, while fostered and encouraged in schools, can only be achieved in combination with the student's development in the wider community. The achievement of self-worth, a goal that is viewed as a partial surrogate for many education outcomes, is clearly accorded a position of primary importance by educators in the province of Ontario. Gradations of importance are assigned to other goals. Finally, clear differences exist in the relative importance accorded to goals and outcomes of education by school boards and directors of education, but not in the order in which the goals and outcomes are ranked.

A second conclusion concerns the impact of OSIS. Most educators recognize a duality in changes in educational policy in Ontario resulting from the implementation of the OSIS goals. On one hand they see these changes as representing increased emphasis on some educational outcomes such as helping students to acquire esteem for the customs, cultures, and beliefs of others. On the other hand they see the goals as representing a "back to basics" movement in educational curriculum in Ontario. Both these changes will require changes in teacher allocation. Most see the "back to basics" movement as being largely responsible for the creation of the OSIS goals.

The measurement of success in achieving goals is the focus for a third conclusion. Educators identify and use well defined and specific measures, what we have called hard measures, for the more concrete or hard goals of education such as preparation for work and developmental cognitive abilities. Hard measures are lacking for the more abstract or soft goals of education such as self-worth and multicultural awareness. As a result, few educators report monitoring their boards' success in achieving the soft goals of education in any way other than observation.

The fourth and final conclusion deals with differences in attitudes among respondents. Considerable uniformity exists in the background characteristics and opinions of the respondents on substantive issues such as the level of importance attached to different goals of education. Little variation exists between views of directors of education and other supervisory officers or between educators from large and small school boards. However, substantial differences do exist between public and separate school board officials with respect to goals of education, and the reasons for, and impact of, the implementation of the OSIS goals.

Common ground and contrasts exist between educators with respect to the educational paradigms that have been identified: the interpretive, functionalist, and Marxist. Virtually all educators embrace the interpretive model of education. In addition most educators tend to lean towards either a functionalist or Marxist concept of educational outcomes. However, educational practitioners in Ontario are best described as being influenced by a broad range of educational theory and practice.

One respondent concluded the interview by noting that it was "an extremely exciting time to be involved in education in Ontario". He stated that the educational system in Ontario was entering into a time period "that will change the value of schools." Respondents hope that educators who have the system's "best interest at heart" will direct this change.

CHAPTER EIGHT

CONCLUSIONS AND RECOMMENDATIONS

This chapter discusses the feasibility and utility of synthesizing those sociological models of education reviewed in chapter 4, elaborates the relationship of research methodologies and sociological models particularly with reference to the long-range research needs of educational planners, and develops a number of recommendations that should prove useful in researching OSIS goals.

Contemporary sociology of education has experienced a series of shifts in perspective. Emerging perspectives catch on, are challenged, and give way to new alternatives. Each alternative perspective usually creates a strong tradition of empirical work. Although initially growing out of new theory, this empirical research frequently takes on a "life" of its own and may only infrequently ground itself in the original theory.

The structural-functional model was the earliest perspective and, until a decade or so ago, the only theory developed to explain what schools do. Focusing as it did on the transition to adulthood, the structural-functional paradigm portrayed schooling as an efficient and rational strategy for sorting and selecting talented and motivated people to enter responsible and high status positions. Hence, schools were primarily conceptualized as teaching necessary cognitive skills and knowledge required for economic growth; functional sociologists operated under the fundamental assumption that the framework and values of society were acceptable. This model helped develop a strong survey research methodology to evaluate hypotheses concerning what factors induce students to do well in school. Much of the research that evolved from this concern focuses on cognitive outcomes and the evaluation of achievement. In recent years structural-functional theorists and researchers have concentrated more attention on longer term outcomes, especially outcomes that are associated with occupational or vocational success (e.g., type of work, job prestige, income levels). Status attainment research and social mobility studies are examples of this sort of research.

The conflict model(s) of education that developed in the 1970s introduced an essentially sceptical or even cynical view of schooling in modern society. This view emphasized the importance of class domination and class related values and attitudes that schools transmit in processing students rather than the cognitive skills that they teach. Weberians introduced the additional factor of "status power" and how schools act to create different status groups. Research studies that were prompted by this new view of schooling emphasized non-cognitive outcomes of schooling such as personality attributes, class-related values and attitudes, taste, and manners.

This more radical or critical approach to school outcomes constitutes an important challenge to the structural-functional model of education. Conflict sociologists reject the present framework of society, arguing that elite groups sustain values that protect and even expand their interests to the detriment of less advantaged groups. As we have already indicated, while there are fundamental differences, there are also similarities. One very crucial similarity is a "macro" perspective on the relationship of social structure and educational outcomes.

The interpretive model and the "new sociology of education" that appeared in England shifted attention from structural factors and gave more of a "micro" perspective to the educational processes within schools. Educational institutions were increasingly recognized as "knowledge processing" and the definitions of what counted as "bright" or "dull" students were no longer thought of as predefined or absolute. Rather, such definitions were conceptualized as negotiated within the context of social relationships in school. The interpretive model also introduced a concern with curriculum and classroom interaction and emphasized that the traditional research strategies employed by structural functionalists and conflict researchers would simply not work at this level. Instead, only qualitative research methods could reveal the subtle nuances and processes of schooling. To a large extent, most research studies that employ the interpretive paradigm have centered on classroom interactions, negotiations between students and teachers, curriculum, and how knowledge comes to be created and classified.

One of the central concerns of this project has been to inquire whether a *synthesis* of conceptual perspectives on the outcomes of education is feasible and, if so, useful. Clearly the question is a key one if educators and educational planners are to make effective use of a large and growing body of research and theoretical literature. *After thoroughly reviewing the sociological perspectives on the outcomes of education, we must conclude that complete synthesis is neither possible nor desirable*. This conclusion is based on several observations.

Although there may be a number of basic similarities among the major sociological perspectives reviewed (e.g., the macro perspective shared by both structural functionalism and conflict theory) there are important and fundamental differences as well (e.g., the unique attempt of the interpretative model in opening up the "black box" of schools). While it may be possible to create a more abstract or general "model" by incorporating diverse elements from the models reviewed, this synthesis would easily ignore pertinent details offered by each distinct model.

While sociologists may appear to adhere to any one of the theoretical perspectives reviewed in this report, most actual empirical research does not explicitly use grand theory as its basis (Warshaw 1975). Middle-range theories are more frequently employed *and most research is empiricist, using neither general (e.g., functional or conflict) theory*. One good illustration is the evaluation research performed by school boards on cognitive or achievement outcomes. This research is inductive or empiricist, deriving from perceived and practical school board needs.

The review of major sociological models reveals that there is a great deal of variation in theoretical perspective within any given large or general paradigm. For example, within the structural-functional model there is a conceptualization of schooling that ranges from conservative defence to a more critical evaluation of the factors that contribute to an effective achievement of important educational outcomes. Furthermore, while it may be possible to outline general themes presented by theorists who endorse the interpretive model, there are fundamental philosophical differences within this general school of thought. A "synthesis" built on a selective extraction of elements from essentially diverse theories within a general school of thought would suffer from oversimplification and artificial generalization.

Given the fundamental and important differences across and within conceptual perspectives on the outcomes of schooling and the empirist or atheoretical nature of most research on outcomes of schooling, a forced synthesis is neither feasible nor desirable at this time.

Rather, we recommend an eclectic approach to the use of major sociological perspectives. The review reveals that each perspective offers valuable insights with regard to educational outcomes. Structural-functionalism and conflict theory both offer interpretations of what schools do in relation to the larger society. These theories therefore lead one to focus on such things as the role of values, social stratification, history, meritocracy, equality of opportunity, social mobility, ideology, and so on. In contrast, the interpretive model uncovers the structures and processes of schooling at a microlevel and focuses attention on curriculum and classroom interaction. Considered collectively, these perspectives contain an inventory of important outcomes and causes that should be evaluated for inclusion in research on educational outcomes. Table 8.1 presents a partial list of general outcomes and causal factors identified in the review of literature. The reader should note that, dependent on the model, a factor may be treated either as "cause" or "outcome". For example, self-concept or self-worth is employed as an intervening, causal variable in status attainment research but may also be considered an outcome of schooling by conflict sociologists. Given our eclectic approach to the use of theory in suggesting possible causes and outcomes, these latter factors are not separated by type of theory.

TABLE 8.1

A PARTIAL LIST OF CAUSES AND OUTCOMES DERIVED FROM FUNCTIONAL, CONFLICT, AND INTERPRETIVE MODELS

Causes

- Economic class
- Educational aspirations
- Ethnicity/race
- Grade point average
- Influence of significant others (e.g., parents, teachers, peers)
- IQ
- Learning style
- Linguistic comprehension and style (e.g., speech codes)
- Occupational aspirations
- Parental levels of educational-occupational attainment
- School climate
- School resources (e.g., libraries, labs)
- School stratification
- Self-concept or self-worth
- Sex
- Socio-economic status
- Teacher expectations
- Unemployment rates
- Urban or rural location

Outcomes

- Achievement values
- Class related values and attitudes
- Cognitive skills
- Competitiveness
- Conformity
- Creation of curriculum
- Cultural, political, and economic socialization
- Educational attainment levels
- Job attributes (e.g., prestige, type, income)
- Knowledge
- Leadership
- Personality formation
- Self-concept or self-worth
- Social mobility
- Status culture groups
- Tolerance, respect for other groups, cultures
- Work-related values and attitudes

Although a conceptual synthesis of models is not feasible, we can derive multiple benefits from models in terms of research strategies. As already seen, many studies in the sociology of education are "one methodology" studies (Forcese and Richer 1973, 152). They usually employ a single data gathering strategy, be it qualitative or survey research in nature.

We strongly recommend that, rather than treat the selection of research methodologies as "either or" choices, it is frequently beneficial to employ both strategies in studying educational outcomes. As indicated earlier, outcomes that are poorly researched may first require an in-depth case study or observational approach. Should the researcher then wish to explain the outcome, a survey research strategy may be subsequently and profitably employed.

Qualitative and survey research strategies can work well as complementary methodologies in one major study. The rich in-depth detail offered by an observational study of a classroom or school can provide contextual information that adds to or complements the explanatory advantages of a survey research design.

Forcese and Richer offer yet an additional rationale for employing several research methodologies in gathering the same information:

> the argument here is that a relatively inexpensive way of increasing accuracy is to collect the same information in several different ways. The basic principle is that the more independent confirmations of a hypothesis we can obtain, the more confidence we may have in its viability....In any event, both the reliability and validity of our research is strengthened (1973, 152).

Sam D. Sieber indicates several additional rewards that result from integrating survey research and field work (Caplovitz 1983, 163-168). Qualitative or field research may provide researchers with an in-depth understanding of the various strategic sub-populations; this understanding could then lead to an appropriate formulation of the sampling frame for survey research. Another advantage of integrating techniques relates to the fact that intense observation and in-depth interviews are often enormously helpful in developing a survey instrument (e.g., questionnaire). Without this type of input, questionnaires may be seriously defective in that measures of all relevant concepts are not included and/or the measures have not been adequately screened by employing field research techniques.

We also recommend that a number of benefits result from combining an eclectic approach to sociological theories on educational outcomes with a multiple methods strategy. This reasoning is based on several assumptions.

Social scientists who are committed to different theories of what schools do, and who strongly adhere to either conservative or radical views of what schools should do, may be hampered in their objective quest for scientific knowledge. By adopting more of an eclectic approach, a more balanced ideological view of outcomes and their causes can be achieved.

Furthermore, by adopting a conceptually eclectic approach and an openness to employing different research methodologies, the present narrow focus on cognitive outcomes can be broadened to include a wider range of softer outcomes such as research on self-worth, racial tolerance, and student-teacher interactions. Moreover, by employing various research strategies, additional and perhaps more valid measures of educational outcomes can be developed.

There has clearly been an overwhelming reliance on one-wave or cross-sectional evaluation studies of educational outcomes in Ontario. This is firmly established through the inventory of Canadian research studies in chapter 6. Cross-sectional studies fail to disentangle the effects of schooling from prior effects (e.g., family and peer influences, previous schooling).

Many school board officials reported that schools are crucially involved in meeting the demands of social change and providing their students with effective strategies for informed personal change. Such changes, be they in the affective, behavioural, psychological, or cognitive domains, can more effectively be studied in longitudinal or panel surveys where there are multiple measurements of dependent variables (that is, educational outcomes) over time. In a recent book by Wilbur B. Brookover et al., entitled Creating Effective Schools, the authors argue that a value-added approach is required if we are to assess whether schools matter in effecting changes in achievement among students and particularly among disadvantaged students. In discussing the assessment process they state:

> Another extremely valuable application of the aggregated process is to examine the rates of progress for youngsters from advantaged and disadvantaged sure that the full range of students (advantaged and disadvantaged) are progressing satisfactorily in their mastery of essential skills (Brookover et al. 1982, 247).

Panel studies allow the measurement of changes for the same persons through time. They represent for this reason an ideal methodology for evaluating value-added changes (in educational outcomes) among students. It should be mentioned that the financial costs of doing panel surveys far outweigh those of conducting cross-sectioned studies. However, the research and policy benefits far outweigh the costs. We therefore strongly recommend that more panel studies of educational outcomes (e.g., achievement, multicultural awareness, or transition to work) be promoted by the Ministry of Education and Ministry of Colleges and Universities.

In the course of this project, we discovered that only seventeen public school boards in Ontario have formal research or planning departments. Furthermore, of the seventeen only four have conducted any research that is directly relevant to models and outcomes of education. A review of eight major sources for Canadian data sets relating to models and education outcomes is reported in chapter 6 and reveals a wide range of independent research studies. Each study is individually conceptualized and employs non-standardized measures of educational outcomes. (The exception to this is in the area of cognitive testing where occasionally the same measures such as the Canadian Tests of Basic Skills [CTBS], or the Canadian Achievement Tests [CAT] are used.) It would therefore be difficult to compare and contrast findings across studies or even subsets of studies.

Given the largely ad hoc nature of current research on models and educational outcomes we recommend the development of a Ministry of Education Steering Committee, consisting of representatives from government, education, and the private sector. In a recent publication by the Canadian Education Association, Leslie D. McLean made a similar recommendation with regard to establishing provincial task forces on student evaluation and technological change (1985, 49).

Once established, the steering committee on educational outcomes would address a number of issues including: Which educational outcomes require immediate research attention? What methodologies should be employed in researching short-term, intermediate, or long-term outcomes? How will educational planners and school board administrators benefit from these studies?

Although few school boards are actively engaged in conducting empirical research on educational outcomes, our survey of practitioners indicates some consensus as to future research priorities, namely, the need to study "self-worth" and the "transition to work". Furthermore, education and research directors strongly emphasized that "hard" measures of "soft" outcome areas (e.g., self-worth, values) are not currently available and need to be developed to facilitate future research. Nearly half of the directors that responded felt that the present level of research on goals and outcomes of education was poor. The Ministry of Education steering committee could and should play an important role in improving the status of research on educational goals and outcomes. More research on developing hard measures of soft outcomes is required; funding to support the development and creation of such measures is needed and more effective means of communicating the results of such research to educational planners should be high priority items on the steering committee's agenda.

The reviews of educational history in Ontario, sociological models, and the identification of Canadian data sets prompt two additional conclusions. First, there are secondary data sets that can be re-analysed to answer questions regarding specific educational outcomes. Valuable insights result from analysing past educational outcomes in terms of societal changes. These can help develop research strategies to evaluate the present educational scene. For example, if gender was found to profoundly influence the transition to work in the 1960s and 1970s, is its influence equally strong in the 1980s?

Second, given the ad hoc nature of research on educational outcomes in Ontario and the lack of centralization in storing such data (except for several large or outdated archives housed at the Ontario Institute of Studies in Education (OISE) and the Institute for Social Research at York University (ISR), further analysis and the communication of findings are difficult to accomplish. In addition to forming a steering committee, the Ministry of Education should continue to develop a strategy for archiving valuable outcome studies. (In 1979 funding was provided by the Ministry of Education to OISE and to ISR to develop an Ontario Education Data Archive [OEDA]. A good beginning was made but when funding ceased, the project was not continued. The last catalogue for these holdings was published in 1979.) Furthermore, this archiving process should be cumulative in the sense that future studies of outcomes should also be archived.

Specifically, we recommend that greater or expanded effort be put into four already existing services: ONTERIS, OAIP, OEDA, and data communications. More specifically we recommend:

(1) Mechanisms should be put in place to ensure that the ONTERIS data base provide more even and complete coverage of materials, especially those produced by the boards of education and the various interest groups in Ontario;

(2) The Ontario Assessment Instrument Pool (OAIP) be expanded to include items, or banks of items, that can be used in measuring outcomes beyond the level of academic achievement in mathematics, English, reading, etc. (e.g., self-worth, racism, values);

(3) Ongoing funding be provided to continue the work begun by OISE and the ISR in archiving, in a usable fashion, Ontario education related data sets;

(4) An electronic networking system, largely already in place (e.g., DATAPAC) be developed to permit educational planners to locate information quickly and communicate research findings to other planners across the province. The Secretary of State, through its centres of specialization funding, has recently funded the Canadian Higher Education Research Network (CHERN) to achieve similar objectives at the postsecondary level. The technological solutions to problems of networking developed by CHERN could be communicated to the steering committee.

A final recommendation that the steering committee should consider concerns the largely ad hoc and nonstandardized nature of research on education outcomes in Ontario. We recommend that after members of the steering committee have established which "hard" and "soft" outcomes should receive high research priority, measures be developed for all regions and school boards in Ontario. Furthermore, these outcome measures should then be communicated widely and periodically updated.

An illustration of this strategy is reflected in the recent accomplishments by the U.S. Department of Education. In response to a request in 1982 from the National Center for Education Statistics (NCES) for a set of education indicators, a Task Force of the Educational Leaders Consortium (ELC), consisting of sixteen national education organizations, recommended fourteen indicators for immediate use and seven others for future development. Several of these outcome measures are relevant for our purposes:

(1) the extent to which students master the content of schooling relative to their comprehension in reading, science, and mathematics;
(2) secondary school student performance on Scholastic Aptitude Test (SAT) and American College Testing Program (ACT) scores as predictors of potential college performance;
(3) student performance data on mathematical ability from international test score comparisons;
(4) percentage of 18-and 19-year-old students who have graduated from the twelfth grade by ethnic/racial group;
(5) post-high-school activities of seniors in the October following graduation;
(6) percentage of freshman college students enrolled in remedial courses; and
(7) percentage of 18 to 24 year-olds voting, understood as a measure of citizenship.

These measures range from short-term to long-term outcomes and primarily employ "hard" cognitive indicators (e.g., student performance).

This work seems to auger well for the possibility of developing standardized measures of desirable outcomes. Of course, the steering committee proposed in this report might well select and develop quite different outcomes and measures more suitable for the particular needs of Ontario education.

APPENDIX A

INVENTORY OF EDUCATION DATA SETS

DS032

Authors: Alter, Sharon

Title: Education Philosophy and Purposes of Schools: Results of a National Survey

Journal: Research report - Simcoe County Board of Education

Year: 1984

Type of Study: National survey on goals

Population: Boards of Education; Faculties of Education; Trustees' Associations

Keywords: Goals/inventory

DS001

Authors: Anisef, P.; Paasche, G.; Turrittin, T.

Title: Is the Die Cast?

Journal: Research report - Ministry of Education (Ontario)

Year: 1980

Type of Study: Large survey

Population: Grade 12 students in Ontario (N=1522)

Keywords: Achievement/aspirations/transition to work/transition to higher education

Notes: A six-year follow up of the high school students surveyed in the Critical Juncture; Longitudinal survey

DS002

Authors: Anisef, P.

Title: The Critical Juncture

Journal: Research report - Ministry of Education (Ontario)

Year: 1975

Type of Study: Large survey

Population: Grade 12 students in Ontario (N=2555)

Keywords: Transition to work/transition to higher education/aspirations/socio-economic status/career intentions

Notes: Survey and follow-up

DS030

Authors: Baker, Peter; Campbell, Warren; Paterson, Anne; Wideman, Marilyn E.

Title: Physical and Health Education: Subject Selection and Student Attitudes

Journal: Research report - Scarborough Board of Education (ON03281)

Year: 1980

Type of Study: Large survey (N=1500)

Population: Students in grades 8-12 in board of Scarborough

Keywords: Goals/physical/health education

Notes: Selection non-selection criteria for physical education; longitudinal study

DS013

Authors: Breton, Raymond

Title: Social and Academic Factors in the Career Decisions of Canadian Youth

Journal: Research report - Ottawa: Manpower and Immigration

Year: 1972

Type of Study: Large survey

Population: Canadian Youth

Keywords: Socio-enonomic status/career decisions/mental ability/transition to work/transition to higher education/family influence

DS043

Authors: Brown, Doug; Poiker, T.K.

Title: Plans and Profile Characteristics of Grade 12 Students in British Columbia

Journal: Research report - The British Columbia Post-Secondary Education Enrolment Forecasting Committee (Report #40)

Year: 1982

Type of Study: Large survey

Population: Grade 12 students - British Columbia

Keywords: transition to higher education/attitudes/socio-economic status/family role

DS017

Authors: Bullivant, Brian M.

Title: The Pluralist Dilemma

Journal: Canadian Ethnic Studies 13, 2, pp. 1-22

Year: 1981

Type of Study: Small survey; administrative data analysis

Population: Government officials

Keywords: Multiculturalism/pluralism

Notes: Analysis of government policy data

DS021

Authors: Burnham, B.

Title: The Growth of Moral Reasoning in Late Childhood and Early Adolescence

Journal: Research report - York County Board of Education

Year: 1976

Type of Study: Case study

Population: Cohort of 60 Grade 5 students

Keywords: Moral reasoning/values/methodology/OSIS goals/curriculum

Notes: Longitudinal study of experimental/control group of students; employed Kohlberg's stage - sequence model; employed OISE's moral discussion program

DS028

Authors: Calman, Ruth C.

Title: Scarborough's CEDSS Project: Internal Evaluation Report No. 3: An Evaluation of Scarborough's Co-operative Education Program

Journal: Research report - Scarborough Board of Education (ON03000)

Year: 1984

Type of Study: Large survey (747 students; 79 teachers; 358 employers; 438 parents) - Scarborough

Population: Students, teachers, employers, parents

Keywords: Transition to work/educational system gap

Notes: Control experiment - students who were half way and students who had not stated co-operative education programs

DS034

Authors: Clarke, Edmund; Cook, David; Fallis, George

Title: Socialization, Family Background and the Secondary School

Journal: Socialization and Values in Canadian Society: Socialization, Social Stratification and Ethnicity, vol. 2 (Robert M. Pike and Elia Zweik, eds.

Year: 1975

Type of Study: Large survey

Population: Students in grades 9 - 13 (Ontario)

Keywords: Socio-economic status/accessibility/values/attitudes family influence

DS036

Authors: Crysdale, Stewart

Title: Aspirations and Expectations of High School Youth

Journal: International Journal of Comparative Sociology 16, 1/2, pp. 19-36

Year: 1975

Type of Study: Small longitudinal survey (N=313)

Population: Graduates of a senior elementary school (Toronto)

Keywords: Socio-economic status/aspiritions/values/expectations

Notes: IQ testing; 304 wage earners in same and also interviewed; used a working-class study area

DS037

Authors: Denis, Ann B.

Title: Wife and/or Worker: Sex Role Concepts of Canadian Female Students

Journal: The Changing Role of Women in Family and Society: A cross-cultural comparison

Year: n.d.

Type of Study: Large survey (N=666)

Population: Female students at 2 post-secondary institutions

Keywords: Women/role preference/attitudes/values/transition work/family role/ethnicity/socio-economic status

DS012

Authors: Dhanota, A.S.; Wright E.N.; Toplak, M.

Title: Co-operative Education, Career Exploration Visit and Work Experience Weeks: An Evaluation

Journal: Research report - Toronto Board of Education

Year: 1980

Type of Study: Descriptive/assessment study

Population: Students in work experience programs

Keywords: Transition to work

DS024

Authors: Dilling, Harold John; Longstaff, Frank R.; King, Alan J.C.

Title: Aptitude, Achievement, Social Background and Psychological Adjustment of Grade Nine Secondary School Students

Journal: Research Report - Scarborough Board of Education and OISE (ON00400)

Year: 1968

Type of Study: Large survey

Population: Grade 9 students (Scarborough)

Keywords: Socio-economic status/academic achievement/methodology/influence of parents/aptitude

Notes: California Test of personality; Alpert-Harber Test of Anxiety; Intermediate Form; Ontario School record cards used

DS020

Authors: Dilling, Harold John: Fieldstone, Marlo; Wideman, Marilyn E.

Title: Values Education in the Classroom: Values Transmitted, Methods Used, and Characteristics of Teachers

Journal: Research report - Scarborough Board of Education (ON01138)

Year: 1977

Type of Study: Observational

Population: Teachers in grades 2, 5, and 8 (Scarborough)

Keywords: Values/goals/methodology

Notes: Random selection of teachers from volunteers; Six values selected and transmission of by teachers observed: competition; obedience to authority; independent decision making; creativity; co-operation; affection

DS027

Authors: Dilling, Harold John; Sprumont, Barbara L.

Title: Employment and Training: Perceptions and Reality

Journal: Research report - Scarborough Board of Education (Ministry of Education) (ON00099)

Year: 1974

Type of Study: Small survey

Population: Students and employees

Keywords: Transition to work/ school programs/interpersonal skills/technical skills/education/employment gap

Notes: Comparison of schooling emphasis: teachers vs employers

DS026

Authors: Dilling, Harold John; Sprumont, Barbara L.

Title: A Comparison of Secondary School Students with Similarly Oriented Collegiate Students in Terms of their Employability and Other Characteristics

Journal: Research report - Scarborough Board of Education (Ministry of Education) (ON00014)

Year: 1973

Type of Study: Large survey

Population: Secondary school graduates; dropouts; vocational students

Keywords: Socio-economic status/achievement/aspirations/transition to work

Notes: Detailed job classification used; employment history of student followed

DS011

Authors: Fraser, J.A.

Title: Education in Peel Secondary Schools

Journal: Research report - Peel Board of Education

Year: 1979

Type of Study: Survey

Population:

Keywords: Work/school relationship/transition to work

DS004

Authors: Gaskell J.; Lazeson M.

Title: Between Schools and Work: Perspectives of Working Class Youth

Journal: Interchange II, 3, pp. 80-96

Year: 1980-81

Type of Study: Small survey

Population: Non-random sample of high school leavers in Canada

Keywords: High school leavers/transition to work/longitudinal survey

Notes: Adjustment to paid employment

DS038

Authors: Glaze, Avis

Title: Factors which Influence Career Choice and Future Orientations of Females: Implications for Career Education

Journal: Ph.D. thesis - OISE

Year: 1979

Type of Study: Large survey (N=1167)

Population: Females in grades 11-13 (Ontario)

Keywords: Transition to work/transition to higher education/females/family role/socio-economic status/aspirations

DS009

Authors: Hall, Oswald; Carelton, Richard

Title: Basic Skills at School and Work: Albertown

Journal: Research Report - Ontario Economic Council

Year: 1977

Type of Study: Community case study

Population: Students, parents, teachers, employers in small town

Keywords: Work/school gap/basic skills training/transition to work/social pressures/education and economy

Notes: Study of mid-sized urban community in Southern Ontario

DS039

Authors: Harvey, Edward; Harvey, Loma R.

Title: Adolescence, Social Class and Occupational Expectations

Journal: Canadian Review of Sociology and Anthropology

Year: 1970

Type of Study: Survey (N=3451)

Population: Grade 10 students in one high school

Keywords: Family role/expectations/transition to work/socio-economic status

Notes: Students were from a socio-economically heterogeneous, multiprogram urban high school
Measurement of consequence between
(a) occupational values and choice;
(b) financial expectation;
(c) parental occupational choice

DS014

Authors: Harvey, E.

Title: Education Systems and the Labour Markets

Journal: Publisher: Longman

Year: 1973

Type of Study: Survey

Population: Graduating classes in Canada

Keywords: Labour markets/education system gap/transition to work

Notes: Samples from 1960, 1964, and 1968 graduating classes; historical cohort analysis; recall interviewing

DS025

Authors: Hayball, Helen L.

Title: Acceleration: Effects, Selection Criteria, and Factors Associated with Achievement

Journal: Research report - Scarborough Board of Education (ON00429)

Year: 1971

Type of Study: Small survey

Population: Accelerated/non accelerated students (Scarborough)

Keywords: Socio-economic status/achievement/aspirations/ethnicity

Notes: Uses Blishen Socio-Economic Index

DS015

Authors: Hobbs, E.D.; Erickson, Gaaten L.

Title: Results of the 1978 British Columbia Science Assessment

Journal: Canadian Journal of Education 5, 2, pp. 63-80

Year: 1980

Type of Study: Large survey

Population: Students in grades 4, 8, and 12 (British Columbia)

Keywords: Student achievement/attitudes/evaluation methods/scientific literacy/goals/academic achievement

Notes: Provincial learning assessment program; evaluation of 6 goals; achievement testing

DS048

Authors: Khan, Sar B.; Alvi, Sabir A.; Kwong, Siu Lam

Title: Field Dependence and Field-Independence Cognitive Styles of Intermediate and High School Students in Relation to Differences in Age/Grade, Gender, and Academic and Vocational Orientation

Journal: Research report - OISE

Year: 1985

Type of Study: Field testing survey

Population: Students in elementary and secondary schools - Peel Board of Education

Keywords: methodology/measurement/cognitive skills/personality differences

Notes: Employed standardized tests: Group Embedded Figures Test (GEFT); Self-directed search (SDS); Canadian Tests of Basic Skills (CTBS)

DS046

Authors: King, Alan J.C.

Title: Who Goes to College?

Journal: Research report - OSSTF

Year: 1983

Type of Study: Administrative data analysis/small survey

Population: Grade 12 graduates/CAAT students

Keywords: transition to higher education

Notes: Data from Ontario College Information System analyzed; interviews were made with secondary school guidance counsellors

DS006

Authors: Livingstone, D.W.

Title: Public Attitudes Toward Education in Ontario

Journal: Research report - OISE (OEDA 118)

Year: 1978

Type of Study: Large survey (N=1034)

Population: Ontario adults 18 years and over

Keywords: Social background/public attitudes/goals

Notes: Public attitudes survey school priorities

DS023

Authors: Longstaff, Frank R.; King, Alan J.C.

Title: Attitudes and Perceptions of Grade Nine Secondary Students

Journal: Research report - Scarborough Board of Education and OISE (ON00397)

Year: 1967

Type of Study: Large survey

Population: Grade nine students (Scarborough)

Keywords: Socio-economic status/academic achievement/methodology/influence of parents

Notes: California test of personality; Alper-Haber Test of Anxiety

DS049

Authors: McKay, Lorraine; Morris, Susan

Title: A Survey of Characteristics of Students from General and Advanced Level Programs

Journal: Research report - Carleton Board of Education and Carleton University

Year: 1984

Type of Study: Small survey

Population: Students from grades 10, 11, 12 (Carleton Board)

Keywords: Cognitive development/aspirations/student achievement/attitudes/general level programs vs advanced level programs/socio-economic status/self-image

Notes: Employed Blishen occupation scores; Hermon-Nelson and Cattrell Cultive Fair Intelligence Tests; Nelson-Derry Reading Test; California Occupational Preference System; Johnson Personality Inventory; Continuation of "General Level Study" - Brenan, J.; Norman, P.; Prescott, Mac (May 1982)

DS033

Authors: Ministry of Education (Ontario)

Title: Ontario Assessment Instrument Pool (OAIP)

Journal: Research publication - Ministry of Education

Year: 1980

Type of Study: Instrument item bank for testing and evaluation

Population:

Keywords: Assessment/academic achievement/measurement/methodology

Notes: Testing instruments for evaluation of performance; grade and difficulty levels indicated for each item subject areas: English, French, geography, history, mathematics, physics

DS018

Authors: Ministry of Education (Ontario)

Title: Physical and Health Education: Intermediate and Senior Divisions

Journal: Provincial Review Report - Ministry of Education: Ontario (ON03498)

Year: 1984

Type of Study: Small survey (N=140)

Population: Educators and members of public

Keywords: Curriculum assessment/public attitudes/health/physical education

Notes: 8 objectives established and then sample interviewed

DS040

Authors: Pavalko, Ronald M.; Bishop, David R.

Title: Peer Influences on the College Plans of Canadian High School Students

Journal: Sociology of Education: A Book of Readings

Year: 1976

Type of Study: Large survey (N=889)

Population: Students in 6 high schools

Keywords: Transition to higher education/socio-economic status/peer influence

Notes: Used intelligence testing

DS022

Authors: Pond-Brevik, Margaret

Title: Family Life/Sex Education Programming - A Survey of Student Needs

Journal: Research report - York County Board of Education

Year: 1976

Type of Study: Large survey

Population: Students and parents

Keywords: Goals/family role/sex education/curriculum

DS003

Authors: Porter, Marion; Porter, John R.; Blishen, Bernard

Title: Does Money Matter?

Journal: Research report - Institute for Social Research

Year: 1971

Type of Study: Large survey (N=9305)

Population: Ontario high school students

Keywords: Equal opportunity/aspirations/parental influence/SES transition to higher education

Notes: Examination of educational plans of Ontario high school students; see also "Stations and Callings: Making it Through the School System", 1982 by same authors. Reflects a follow-up study of same students

DS052

Authors: Raincourt, Richard; Dionne, Jean-Paul

Title: A Study of the Teaching and Learning Styles in Ontario Schools

Journal: Research report - Ministry of Education

Year: 1981

Type of Study: Large survey (N=549,304)

Population: Teachers and students in Ontario

Keywords: Measurement/educational psychology/attitudes/methodology

Notes: Used Psycho-Epistemological Profile (PEP); Attitudes to Education Issues (AEI); Teaching Styles Inventory (TSI); Learning Styles Inventory (LSI)

DS047

Authors: Rocher, Guy

Title: Aspirations scolaires et orientations professionnelles des étudiants

Journal: Research report - Ministry of Education (Quebec)

Year: 1972

Type of Study: Large survey (N=24,534)

Population: Students, parents, teachers, principals (Quebec)

Keywords: Aspirations/transition to work/attitudes/opinions/socio-economic status/parental influence

Notes: Used group and personal interviewing
4 files - students (sample size - 20,834)
- parents (sample size - 1911)
- teachers (sample size - 2000)
- principals (sample size - 250)

DS051

Authors: Rowan, M.; Crawford, P.; Erling, S.; Peebles, D.; MacFarlane, J.

Title: Survey of Secondary School Perceptions: Students, Parents, Staff

Journal: Research report - North York Board of Education

Year: 1984

Type of Study: Large survey

Population: Grade 12 students, parents, staff - North York Board of Education

Keywords: Attitudes/perceptions of education

Notes: Replication of similar studies in 1972 and 1977

DS031

Authors: Russel, C. Neil

Title: Post-High School Outcomes of Manitoba High School Students

Journal: Research report - Department of Education (Manitoba)

Year: 1978

Type of Study: Large survey (N=11,000)

Population: Grade 12 students (Manitoba)

Keywords: Transition to work/higher education/aspirations/attitudes/job satisfaction/socio-economic status

Notes: Students surveyed in last year of high school between 1971-72 and 1976-77; 5,000 followed up in 1978

DS019

Authors: Social Survey Research Centre

Title: A Study of the Attitudes of Parents in the Scarborough School System (ON00413)

Journal: Research report - Scarborough Board of Education

Year: 1970

Type of Study: Large survey

Population: Parents of students in Scarborough (N=524)

Keywords: Attitudes/sex education/family life/physical education

Notes: Telephone survey

DS007

Authors: Traub R.; Wolfe, R.; Wolfe, C.; Evans, P.; Russell, H.M.

Title: Secondary - Post-Secondary Interface Project II: Nature of Students

Journal: Research report - OISE (OEDA 100)

Year: 1976

Type of Study: Large survey/administrative data analysis (N=6594)

Population: Grade 12 and Grade 13 students in Ontario

Keywords: Aspirations/achievement/transition to work/transition to higher education

Notes: 4 files; survey includes student school records; survey compared school programs and marks; cognitive achievement tests administered

DS050

Authors: Turner, Samantha

Title: Longitudinal Study Year I - Claude Watson School for the Arts

Journal: Research report - North York Board of Education

Year: 1984

Type of Study: Small survey

Population: Grade 8 students, staff and parents - Claude Watson School for the Arts

Keywords: Attitudes/arts/attitudes/program evaluation/self-concept/academic achievement

Notes: Used North York Self-Concept Inventory

DS044

Authors: Virgin, Albert; Handscombe, Jean; Fram, Isabel; Broks, Ilona; Crawford, Patricia

Title: "I Don't Know Yet" - West Indian Students in North York Schools

Journal: Research report - North York Board of Education

Year: 1979

Type of Study: multi-method

Population: West Indian students in 2 North York schools

Keywords: multiculturalism/methodology

Notes: Includes a literature review; used a Behaviour Rating check list (teachers); a Self-Concept Inventory (students); Indepth and telephone survey techniques as well as systematic observation

DS010

Authors: Waren, Wendy; King, Alan

Title: School to Work Study

Journal: Research report - OSSTF

Year: 1979

Type of Study: Small survey (N=579)

Population: Former students of 10 secondary schools in Ontario

Keywords: Transition to work/transition to higher education/work/school gap/job satisfaction/job status

Notes: Students traced; employers interviewed

DS005

Authors: Watson, Cicely; McElroy, Sharon

Title: Ontario Secondary School Dropout Study

Journal: Research report - OISE (OEDA 116)

Year: 1974

Type of Study: Large survey (N=20,485)

Population: Ontario High School Students

Keywords: Transition to work/employment/life satisfaction/parental influence

Notes: A study of dropout students; indepth interviews with N=423

DS029

Authors: Wideman, Marilyn E.

Title: Scarborough's CEDSS Project: Internal Evaluation Report No 8: A Evaluation of Student Self-Esteem in Scarborough Schools

Journal: Research report - Scarborough Board of Education (ON03005)

Year: 1982

Type of Study: Large survey (1850 students)

Population: Students in all types of schools in the Board of Scarborough

Keywords: Values/self-esteem

Notes: Piers-Harris self-concept inventory

DS041

Authors: Williams, Trevor H.

Title: Educational Aspirationns: Longitudinal Evidence on Their Development in Canadian Youth

Journal: Sociology of Education 45, 1, pp. 107-30

Year: 1972

Type of Study: Large survey (N=3687)

Population: Grade 12 students

Keywords: Aspirations/academic achievement/family role

Notes: Used longitudinal administrative records for sample selection; traced students from grades 9 - 12

DS008

Authors: Wilson, Margaret; Chambers, Betty

Title: At What Cost? A Study of the Secondary School in Ontario

Journal: Research report - OSSTF (ON02677)

Year: 1976

Type of Study: Large survey

Population: Ontario parents, students and teachers from 50 secondary schools

Keywords: Transition to work/vocational training

Notes: 10,000 students, all OSSTF/teachers and 5,000 parents surveyed; attitude survey; individual briefs from institutions

DS045

Authors: Wood, Dr. James

Title: FEUT Research Priorties Studies

Journal: Forthcoming

Year: 1985

Type of Study: large survey (N=3000)

Population: Associate teachers - University of Toronto

Keywords: Research priorities

Notes: Survey of associate teachers and principals in 19 school boards in Toronto area. Determination of research priorities for the Faculty of Education at University of Toronto

DS042

Authors: Wright, E.N.; Tsuji, G.K.

Title: The Grade Nine Students Survey: Fall 1983

Journal: Research report - Toronto Board of Education

Year: 1984

Type of Study: Large survey

Population: Grade 9 students - City of Toronto

Keywords: Socio-economic status/ethnicity

Notes: Uses Blishen Index for occupational coding

DS016

Authors: Zarb, Janet M.

Title: Non-Academic Predictors of Successful Academic Achievement in a Normal Adolescent Sample

Journal: Adolescence 16, 64, pp. 891-900

Year: 1981

Type of Study: Small survey

Population:

Keywords: Self-concept/motivation/achievement

Notes: Academic self-concept scale; Toronto Board of Education research report

APPENDIX B

INTERVIEW SCHEDULE

YORK UNIVERSITY
SURVEY RESEARCH CENTRE

P672

MODELS IN EDUCATION

RECORD OF CALLS

Call #	Day	Date	Time	Interviewer Name	Comments	Result Code
1						
2						
3						
3						
4						
5						
6						
7						
8						
9						
10						

Survey Research Centre Start Time __ __

Project 672

EDUCATION OUTCOMES QUESTIONNAIRE

SECTION 1: GOALS AND OUTCOMES

1. I am going to read you a list of 6 goals or outcomes of education. I would like you to rate the priority that each goal is given within your board on a 5 point scale where 1 means very low priority, and 5 means very high priority. First, how would your board rate...

a. obtaining a diploma (what priority is this given in your board -- where 1 means very low priority and 5 means very high priority)...................... __
b. developing cognitive abilities... __
c. preparing for work... __
d. getting into college or university... __
e. developing respect for different cultures and races........................ __
f. developing a feeling of self-worth... __

2. Which of the goals that you have rated as having a high priority (interviewer read all given rating of 4 or 5) would you say is given the highest priority in your board?

a. obtaining a diploma 1
b. developing cognitive abilities... 2
c. preparing for work... 3
d. getting into college or university... 4
e. developing respect for different cultures and races........................ 5
f. developing a feeling of self-worth... 6

Refused to select one goal.................(Go to Q.4) 7

3. How do you measure how successful your board is in helping students (read the goal given highest priority)?

---

4. How successful has your board been in achieving each of these 6 goals? For each please tell me if you think the board has been very unsuccessful, unsuccessful, neither unsuccessful nor successful, successful, or very successful in achieving these goals...

very unsuccessful	unsuccessful	neither unsuccessful nor successful	successful	very successful
1	2	3	4	5

a. obtaining a diploma (would you say your board is very unsuccessful, unsuccessful, neither unsuccessful nor successful, successful, or very successful
.... __
b. developing cognitive abilities... __
c. preparing for work... __
d. getting into college or university... __
e. developing respect for different cultures and races........................ __
f. developing a feeling of self worth... __

5. **I am going to read you a list of statements about education in Ontario. For each** statement please tell me if you strongly disagree, disagree, neither disagree nor agree, agree, or strongly agree. The first statement is...

strongly disagree	disagree	neither disagree nor agree	agree	strongly agree	refused
1	2	3	4	5	8

a. All people have equal opportunity to benefit from education in Ontario (do you strongly disagree, disagree, neither disagree nor agree, agree, or strongly agree)........................ ___

b. People achieve high status positions in society on the basis of merit rather than advantages passed on by parents to their children........................ ___

c. The primary goal of secondary schools in modern society is to equip young persons with the specific knowledge required for job opportunities............... ___

d. The achievement of greater social justice can only be obtained through increasing levels of education........................ ___

e. Schools must "sort and select" among their students if the most competent and skilled are to move into adult roles........................ ___

f. When you come down to basics, schools (public and private) really serve the interests of corporate and other elites........................ ___

g. Most schools are mandated to teach their students to follow orders reliably, take explicit directions, be punctual and respect the authority of the teacher at school........................ ___

h. The initial handicaps of economic and cultural disadvantage that some students may bring into school substantially affect their academic achievement levels........................ ___

i. Schools are extremely effective institutions for the "production" of cognitive skills........................ ___

j. In a pluralistic multicultural society, governments have the responsibility to provide the best education possible within a single educational system........... ___

k. The major concerns of schools are the teaching of middle-class standards of taste and manners, rather than the transmission of intellectual skills................ ___

l. In order to truly understand schools we must gain insight into the social life of the classroom and the interpersonal relationships between and among students and teachers........................ ___

6. In general terms, what do you think is the most important impact that education has in the Province of Ontario today?

____

____

____

7. What do you think will be the most important impact of education in the Province of Ontario 10 years from today?

____

____

____

8. I am going to read the list of goals that I read in the first questions again. This time please tell me what priority you personally think should be given to each goal. Using the same scale where 1 means very low priority and 5 means very high priority how would you rate...

a. obtaining a diploma (what priority do you personally think should be given -- where 1 means very low priority and 5 means very high priority)........................ __
b. developing cognitive abilities........................ __
c. preparing for work........................ __
d. getting into college or university........................ __
e. developing respect for different cultures and races........................ __
f. developing a feeling of self-worth........................ __

9. Of those goals that you have rated as having a high priority (interviewer read all given a ranking of 4 or 5) what do you personally think should be given the highest priority?

a. obtaining a diploma........................ 1
b. developing cognitive abilities........................ 2
c. preparing for work........................ 3
d. getting into college or university........................ 4
e. developing respect for different cultures and races........................ 5
f. developing a feeling of self-worth........................ 6

Refused to select one goal..........(Go to Section 2, Q1.) 7

If goal given highest priority in Q.9 is different from Q.2 ask: (Others skip to Section 2, Q1.)

10. How do you measure how successful your board is in helping students (read the goal given highest priority)?

SECTION 2: OSIS

1. How familiar are you with the 13 goals of education as outlined in the OSIS document? Would you say you are...

...very familiar........................ 1
...familiar, or........................ 2
...not very familiar with these goals?........................ 3
never heard/looked at them........................ 4

2a. Are you familiar enough to tell me which of the 13 OSIS goals you would consider to be the most important? Second most important? Third most important? (record up to 3 noting choice 1st, 2nd, 3rd).

2b. Which of the 13 OSIS goals would you consider to be the least important? (record up to 3)

	Most important	Least important
a. RESPONSIVENESS TO THE DYNAMIC PROCESS OF LEARNING Processes of learning include observing, sensing, inquiring, creating, analysing, synthesing, evaluating, and communicating. The dynamic aspect of these processes springs from their source in many instinctive human activities, their application to real-life experience, their systematic interrelation within the curriculum.	_____	_____

b. RESOURCEFULNESS, ADAPTABILITY, AND CREATIVITY IN LEARNING AND LIVING

These attributes apply to modes of study and inquiry, to the management of personal affairs such as career plans and leisure activities, and to the ability to cope with challenge and change. _____ _____

c. THE BASIC KNOWLEDGE AND SKILLS NEEDED TO COMPREHEND AND EXPRESS IDEAS THROUGH WORDS, NUMBERS, AND OTHER SYMBOLS

Such knowledge and skills will assist the learner in applying rational and intuitive processes to the identification and solution of problems by: _____ _____

i) using language aptly as a means of communication and an instrument of thought;
ii) reading, listening, and viewing with comprehension and insight;
iii) understanding and using mathematical operations and concepts.

d. PHYSICAL FITNESS AND GOOD HEALTH

Factors that contribute to fitness and good health including regular physical activity, and understanding of human biology and nutrition, the avoidance of health hazards, and concern for personal well-being. _____ _____

e. SATISFACTION FROM PARTICIPATING AND FROM SHARING THE PARTICIPATION OF OTHERS IN VARIOUS FORMS OF ARTISTIC EXPRESSION

Artistic expression involves the clarification and restructuring of personal perception and experience. It is found in the visual arts, music, drama, and literature, as well as in other areas of the curriculum where both the expressive and receptive capabilities of the learner are being developed. _____ _____

f. A FEELING OF SELF-WORTH

Self-worth is affected by internal and external influences. Internally it is fostered by realistic self-appraisal, confidence and conviction in the pursuit of excellence, self-discipline, and the satisfaction of achievement. Externally it is reinforced by encouragement, respect, and supportive evaluation. _____ _____

g. AN UNDERSTANDING OF THE ROLE OF THE INDIVIDUAL WITHIN THE FAMILY AND THE ROLE OF THE FAMILY WITHIN THE SOCIETY

Within the family the individual shares responsibility, develops supportive relationships, and acquires values. _____ _____

Within society the family contributes to the stability and quality of a democratic way of life.

h. SKILLS THAT CONTRIBUTE TO SELF-RELIANCE IN SOLVING PRACTICAL PROBLEMS IN EVERYDAY LIFE

These skills relate to the skilful management of personal resources, effective participation in legal and civic transactions, the art of parenthood, responsible consumerism, the appropriate use of community agencies and services, the application of accident prevention techniques, and a practical understanding of basic technology of home maintenance. _____ _____

i. AN ACCEPTANCE OF PERSONAL RESPONSIBILITY IN SOCIETY AT THE LOCAL, NATIONAL, AND INTERNATIONAL LEVELS

Awareness of personal responsibility in society grows out of knowledge and understanding of one's community, one's country, and the rest of the world. It is based on an understanding of social order, a respect for the law and the rights of others, and a concern for the quality of life at home and abroad.

____ ____

j. ESTEEM FOR THE CUSTOMS, CULTURES, AND BELIEFS OF A WIDE VARIETY OF SOCIETAL GROUPS

This goal is related to social concord and industrial enrichment. In Canada it includes regard for:
a) the Native peoples;
b) the English and French founding cultures;
c) multiculturalism;
d) national identity and unity.

____ ____

k. SKILLS AND ATTITUDES THAT WILL LEAD TO SATISFACTION PRODUCTIVITY IN THE WORLD OF WORK.

As well as the appropriate academic, technical, and interpersonal skills, this goal relates to good work-habits, flexibility, initiative, leadership, the ability to cope with stress, and regard for the dignity of work.

____ ____

l. RESPECT FOR THE ENVIRONMENT AND A COMMITMENT TO THE WISE USE OF RESOURCES

This goal relates to a knowledgeable concern for the quality of the environment, the careful use of natural resources, and the humane treatment of living things.

____ ____

m. VALUES RELATED TO PERSONAL ETHICAL OR RELIGIOUS BELIEFS AND TO THE COMMON WELFARE OF SOCIETY

Moral development in the school depends in part on a consideration of ethical principles and religious beliefs, a respect for the ideals held by others, and the identification of personal and societal values.

____ ____

3. **Does your board have its own set of goals and objectives for education?**

Yes.. 1
No.....................................(Go to Q. 5.)................ 2

4. Can you send me a copy of your board's goals and objectives?

Yes.....................(Give R address at end of interview)................ 1
No.. 2

5. Do you think the OSIS goals represent a major change, a minor change, or no change at all in Educational Policy in Ontario?

Major change.. 1
Minor change.. 2
No change...............................(Go to Q.11.).................. 3

6. Do you foresee any curriculum changes being made in Ontario schools (in your board) as a result of OSIS goals?

Yes.. 1
No.....................................(go to Q. 8.)................ 2

7. Please describe the changes you foresee.

____

____

____

8. As a result of implementing the OSIS goals, do you think that there will be a need to change the allocation of teachers to subjects in schools?

Yes.. 1
Not sure, maybe.. 2
No... 3

9. What changes in educational policy do you think the OSIS goals represent?

____

____

____

10. Do you think that teachers will require more formal guidelines on how to achieve some of the OSIS goals?

Yes.. 1
No... 2

11. What do you think is the main reason that the Ministry of Education produced the OSIS goals?

____

____

____

12. In general, do you think the OSIS goals are a good or poor representation of what people in Ontario think education should be?

Good........ 1
Not sure........ 2
Poor........ 3

13. How would you rate the present level of research on goals and outcomes of education? Would you say it is...

...good........ 1
...adequate, or........ 2
...poor?........ 3

Refused........ 7

14. In terms of future research where would you put effort in the study of education goals and outcomes?

15. I am going to read you a list of some of the OSIS goals. For each, tell me what you think is the best way to monitor how successful Ontario schools are at achieving the goal. The first goal is helping each student to:

a. acquire the basic knowledge needed to comprehend and express ideas through words, numbers, and other symbols (how would you monitor...)

b. acquire skills that lead to productivity in the world of work

c. acquire skills that contribute to self-reliance in solving practical problems in everyday life

d. **develop esteem for the customs, cultures, and beliefs of a wide variety of** societal groups

SECTION 3: DEMOGRAPHICS

1. I would like to finish the interview by asking you a few questions about your background. First, in what year were you born?

19__ __

2. Can you list all the university degrees that you have obtained? Where was the degree obtained? In what year was it finished?

Degree/Programme	University	Year

3. In what year did you become certified as a supervisory officer?

19__ __

4. For how long have you been working in your present position?

Code # of years __ __

5. Have you worked in an area other than the educational field?

Yes.. 1
No..................................(Go to Q.7.).................. 2

6. What other field have you worked in?

7. **Were you born in Canada?**

Yes.........1

No..........2

Which province?

Nfld....01
NS......02
PEI.....03
NB......04
PQ......05
Ont.....06
Man.....07
Sask....08
Alta....09
BC......10
Terr....11

What country were you born in?

Great Britain...............21
USA.........................22
West Europe.................23
Other Europe................24
Asia........................25
Africa......................26
Middle/South America........27
Australia...................28
Other 29

8. Thank you very much for your participation in this questionnaire. Do you have any additional comments you would like to make?

9. Code sex:

Male.................................. 1
Female................................ 2

IF APPROPRIATE GIVE R ADDRESS TO MAIL COPY OF BOARD'S GOALS AND OBJECTIVES (SECTION 2, Q.4, P.5)

EDUCATION PROJECT
INSTITUTE FOR SOCIAL RESEARCH
RM 255, ADMIN STUDIES
YORK UNIVERSITY
4700 KEELE ST.
NORTH YORK
M3J 2R6

Finish Time __ __:__ __

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